

Massachusetts Division of Insurance

**Analysis of the
Commonwealth
Automobile Reinsurers**

April 2004

April 6, 2004

Ms. Julianne M. Bowler
Commissioner of Insurance
Massachusetts Division of Insurance
One South Station, Suite 5
Boston, MA 02110

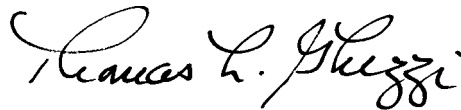
Dear Commissioner Bowler:

Enclosed please find the final report related to our analysis of Massachusetts private passenger automobile insurance, and the Commonwealth Automobile Reinsurers.

It has been a pleasure working on this project with you and your staff. If you have any questions, please do not hesitate to give either of us a call.

Sincerely,

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Enclosure

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BACKGROUND AND SCOPE

As part of its examination of the Commonwealth Automobile Reinsurers (CAR), the Massachusetts Division of Insurance (DOI) engaged the Tillinghast business of Towers Perrin (Tillinghast) in April 2003 to perform a review of various aspects of the Massachusetts private passenger automobile (PPA) insurance market.

The purpose of this analysis is to evaluate the underlying issues related to significant changes in the Massachusetts PPA market in recent years. One of the primary issues is why so few carriers actively participate in the Massachusetts PPA market, and why that number is decreasing. For example, during 1990, 53 companies wrote PPA in Massachusetts. Since that time, three carriers have entered the market, and 34 carriers have stopped writing PPA insurance. Of these 34 withdrawing carriers, two became insolvent, two merged with other PPA carriers, and the remaining 30 paid a “buy-out” fee to be relieved of their obligation to provide PPA insurance. Four of these “buy-outs” occurred during 2003. While the number of carriers has thus dropped significantly in the last 13 years, the number of insured vehicles since 1990 has risen by 20%.

This report presents a summary of our analysis and findings. The report is subject to certain conditions on Distributions and Use, and Reliances and Limitations, which are described at the end of this report. Judgments about the conclusions in this report should be made only after considering the report in its entirety.

Our review included the following main components:

Market Structure and Characteristics

1. Compare the Massachusetts PPA rating structure to the rating structure in other, similar states. This review explored differences between Massachusetts and other states in the rating of rural, suburban and urban risks, youthful and adult operators, and male and

female drivers. This portion of our analysis focuses on differences among risk types for a given insurer.

In addition, we compared the differences in rates among carriers in other states to the rate variation that exists in the Massachusetts PPA market. This aspect of our analysis reviews the variation among carriers for a given type of risk.

2. Describe the current (i.e., 2003) Massachusetts PPA rate subsidies among major rating categories. This review included a comparison of actual approved rates by driver classification and rating territory to the costs to provide insurance in those categories. We included estimates of the amount of over-pricing and under-pricing for each of these categories, as well as estimates of the number of drivers affected by the subsidies.

Involuntary Market Analysis

3. Estimate the financial results (measured by 2000 through 2002 loss ratios) of various Massachusetts PPA producer types. This analysis included estimated loss ratios for “voluntary” producers and “involuntary” producers. The latter category is often referred to as Exclusive Representative Producers, or ERPs.
4. Describe the impact on individual carriers of business produced by their assigned ERPs. This part of our review includes estimated ERP loss ratios by carrier, and comparisons of each carrier’s share of high and low loss ratio ERPs.
5. Provide a high level review of the involuntary market mechanisms and approaches used in most other states, and compare those alternative approaches to the CAR mechanism. We modeled the effect on individual writers of Massachusetts PPA business of changing the CAR approach to various hypothetical involuntary market alternatives.
6. Evaluate CAR’s claims handling performance standards, and CAR’s approach to overseeing servicing carriers’ compliance with the standards.

EXECUTIVE SUMMARY

Our analysis found several structural and operational aspects of the Massachusetts PPA insurance market which separately, and in combination, appear to have contributed to the relatively low participation of insurers in the PPA insurance business. These characteristics of the Massachusetts PPA system are unique among the states, and appear to have caused systematic differences in the profit potential of those carriers that remain in the market.

The major categories of issues that we have reviewed are rate structure, the various mechanisms used to assure insurance availability in all segments of the market due to that rate structure, and the functioning of the involuntary market mechanism. Additional details underlying these issues and a description of our analysis and findings are found in subsequent sections of this report.

Rate Structure

Auto rates in Massachusetts vary by vehicle, territory¹, years of experience and use (driver class), safe driver insurance plan, and other relatively minor factors. Unlike most other states, the Massachusetts Commissioner of Insurance (the Commissioner) fixes and establishes the rates each year. The Commissioner's annual rate decision is based on an analysis of overall statewide results, which is then allocated to driver class and territory. The methods used to perform these allocations include intentional rate subsidies. In general, rural and suburban rates subsidize urban rates, experienced drivers subsidize inexperienced drivers, and inexperienced females subsidize inexperienced males. The term "urban" for the purposes of rate subsidy refers to a relatively small group of cities (Boston, Lawrence, Chelsea, Brockton, Everett, Lynn, Revere, and Springfield). The term "inexperienced" in the Massachusetts PPA rate structure refers to drivers with less than six years of driving experience. As such, these drivers tend to be youthful. Much of the rate subsidization is mandated by statute. The rates are balanced to an overall subsidy level of zero.

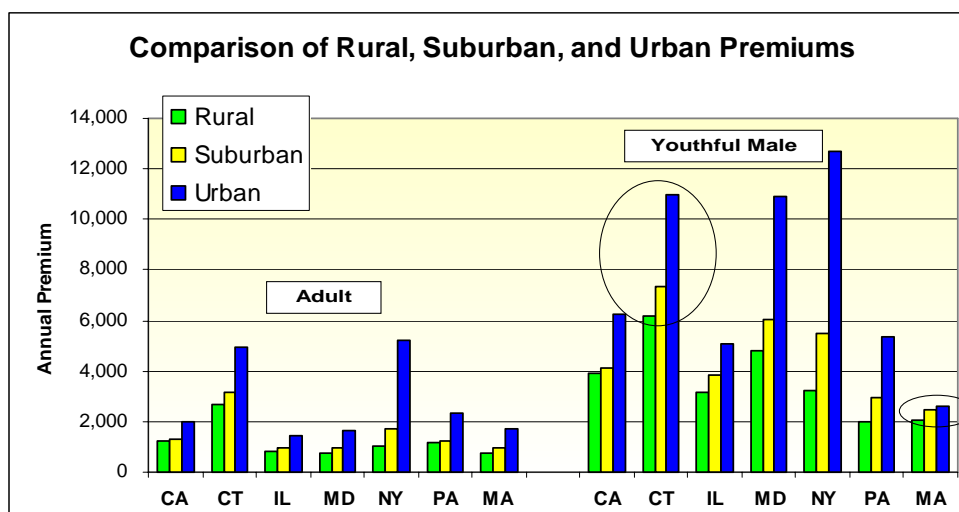
¹ Territory refers to the town or city in which a vehicle is garaged.

In most other states, insurers determine their own rates and rating variables, rather than a Commissioner of Insurance. That is, there is generally significantly greater flexibility in rating in other states.

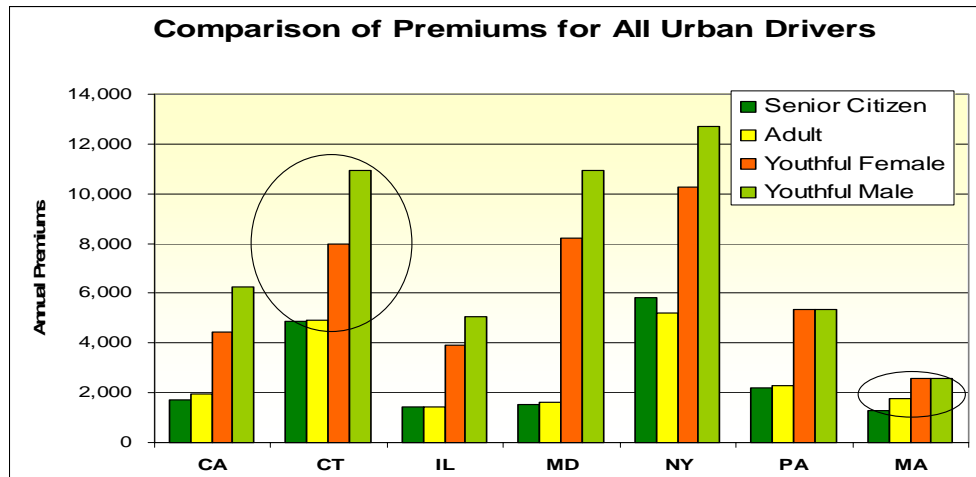
Rating differentials among driver classes (e.g., youthful and adult, male and female drivers) and between rural and urban areas are significantly smaller in Massachusetts relative to other states. This rate “flattening” is not based on the costs to provide insurance to these groups. Instead, it is the result of a system of rate subsidization that systematically undercharges certain classes (inexperienced drivers and some urban drivers), and systematically overcharges other drivers (experienced and non-urban drivers).

As part of our analysis, rate differentials were examined in six other states (California, Connecticut, Illinois, Maryland, New York, and Pennsylvania). While no two states are exactly comparable, these states were chosen by the DOI as relevant due to the size and demographics of their markets. Our most significant findings from this analysis are as follows:

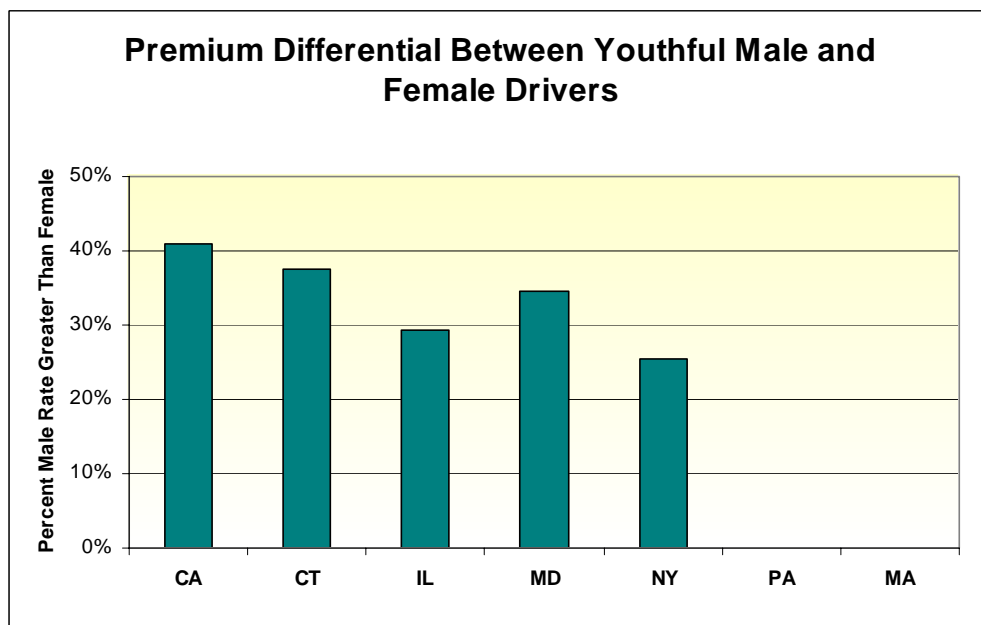
- The differential between urban and non-urban risks is much smaller in Massachusetts relative to other states, especially for youthful (and inexperienced) drivers.



- The Massachusetts premium differential between urban youthful and urban adult drivers is significantly lower than that of the other six states. The following chart illustrates this situation:



- While Massachusetts law prohibits rates to vary by gender, in almost all other states, young males pay higher rates than young females.



The result of the Massachusetts rate subsidization is that that non-urban/experienced drivers are slightly over-priced (by less than \$100 per policy), while urban/inexperienced drivers are greatly under-priced (by over \$500 per policy). Assuming the Commissioner's overall rate is adequate, 86% of the market is subsidizing the remaining 14%. Further, approximately 4.1% of drivers receive a subsidy in excess of \$500 (primarily youthful urban drivers). Note that in 1990, only 2.6% of the market was subsidized in excess of \$500.

Many insurance carriers do not believe that the overall rate is set at an adequate level. This perception, combined with the fact that a large percentage of the Massachusetts PPA market is overcharged by a relatively small amount makes writing business in Massachusetts appear even more difficult than the above statistics indicate. If the perception of the industry is that rates are inadequate, then the view of the proportion of the state that is over-priced or under-priced will vary from the 86% / 14% split noted above. For example, if overall rates are 5% inadequate, the split becomes 79% over-priced/ 21% under-priced. If the perception is that rates are 10% inadequate, then only 25% of the market is over-priced, rather than 86%.

Evaluating the social or political aspects of this approach to rate setting is beyond the scope of our analysis. However, it is well established that pricing insurance for some drivers at less than their costs results in market distortions that, all else equal, would result in carriers' avoiding writing such business, and focusing on writing business in the over-priced, subsidizing driver classes and territories. To counteract the natural risk selection tendencies of insurers operating in a market with significant cross subsidies, it is necessary to create secondary incentives for carriers to write the under-priced business. In Massachusetts, these incentives include:

- A "take-all-comers" statute, whereby all insurers are required to offer policies to virtually all licensed drivers,
- Financial penalties for "over-utilizing" the involuntary market,
- Financial "credits" for voluntarily writing under-priced business, and
- The creation of special protections for a class of independent agents.

These incentive mechanisms, on top of subsidized rates, result in a market that is more complex than any other state in the nation. This complexity, combined with state-set rates and subsidies, creates disincentives for carriers to enter the market, due to the severe restrictions in the carriers' ability to control their own financial results. It often puts some existing carriers at extreme disadvantage to other carriers who, for one reason or another, are favorably situated with respect to the secondary incentive mechanisms.

Availability Consequences of the Rate Structure

One result of the combination of fixed and established rates, intentional subsidization, and the "take-all-comers" statute is that insurance agencies in the subsidized territories may have difficulty obtaining contracts with insurers. If the business generated by an agency is perceived to be priced at a level expected to generate a loss, carriers are less willing to appoint that agency because they are required to take all of its business.

In order to ensure availability of insurance coverage in the under-priced areas of the state, the involuntary PPA market mechanism in Massachusetts, known as the Commonwealth Automobile Reinsurers (CAR), created an agency designation known as the Exclusive Representative Producer (ERP). Each ERP is assigned to one of the insurers in the Commonwealth. That carrier must accept all of the ERP's policies. There are rules governing which agencies may obtain the ERP designation. For established agencies, ERP status results when the agency is unable to obtain a voluntary contract with any carrier. For new agencies, the ERP designation is applied based on "market need." For the latter category to apply, the agency must demonstrate that it operates in an "under-served" area of the Commonwealth.

While originally conceived to ensure availability of PPA insurance in urban areas, the criteria by which ERP designations are made are not geographically restricted. Demonstration of "market-need" or "under-served" areas is necessary only for new agents establishing a business for the first time, and are restricted to a limited number of subsidized territories. Established agencies that have lost all of their voluntary contracts with carriers

immediately qualify for an ERP designation. Therefore, there is no limit to the number of agencies that can become ERPs. We understand that, currently, roughly 30% of agencies are ERPs, who service about 25% of the drivers.

Because an ERP designation does not imply a uniform level of “market need” based on rate subsidies, the financial results of ERPs vary considerably. Loss ratio is a common measure of insurance financial results, and is defined as the proportion of premiums that go to pay for losses. The Commissioner’s recent decisions have projected a statewide loss ratio for the industry of about 68%. Based on the subsidies in the rates, and assuming the overall loss ratio of 68%, loss ratios by territory should vary from 57% and 125%.

We reviewed loss ratios for the period 2000 through 2002 for each individual agency in the state². We split agencies into three categories: non-ERPs, ERPs in writing business primarily in rate subsidized territories (“high loss ratio”) and ERPs in subsidy-paying territories (“low loss ratio”). Of the 2,360 agencies, 800 are designated as ERPs. For the three agency categories, the loss ratio distributions are as follows.

NUMBER OF AGENCIES			
Range of Loss Ratios	Non ERPs	ERPs in Low Loss Ratio Territories	ERPs in High Loss Ratio Territories
Below 70%	1,336	241	9
70% - 100%	189	248	36
100% - 150%	28	114	64
Over 150%	7	23	64
Total	1,560	626	173

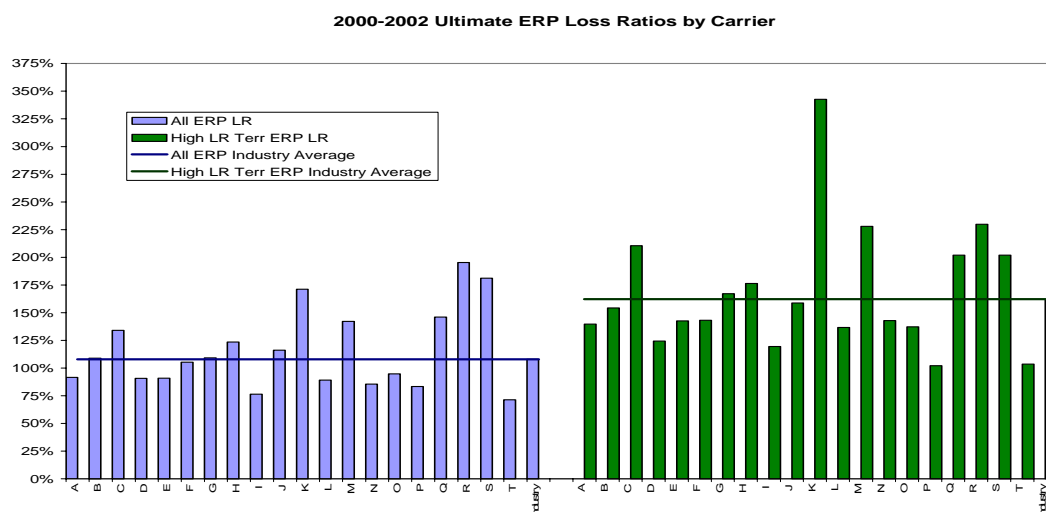
² In this analysis, agencies are defined by “producer code” as reported by carriers to CAR. Therefore, an agency with multiple branches may count as several individual producer codes in the data.

This table shows that there is a subset of the ERP market that has significantly worse experience than expected, while other ERPs produce favorable results. There is the perception among carriers that there are some ERPs that have such unprofitable results and that fraud may be an issue.

ERPs are assigned to insurers so that each carrier gets a share of ERP risks close to its pro rata share of the total market through a “subscription” methodology. However, the methodology is applied to all types of ERPs (“market need” and “former voluntary”), rather than only to the ERPs with high loss ratios. Since there are significant loss ratio differences among subsets of the ERP population, a carrier can achieve a competitive advantage by filling its mandatory subscription of ERPs with the low loss ratio type.

There is the perception in the Massachusetts PPA market that carriers have manipulated their ERP assignments through various means. The “low loss ratio” and “high loss ratio” ERPs are not distributed proportionately among carriers. We found instances in which carriers were writing less than half and more than double their market share of the high loss ratio ERPs. Given the high loss ratios of some ERPs, the distribution of these agencies means that the financial results of these agencies are not distributed proportionately among the carriers. Those carriers with a higher proportion of “high loss ratio” ERPs have little chance of making a profit in the state, while carriers with less than their proportionate share of these agencies have had significantly better than average results. Many carriers cite the disproportionate distribution of the ERP loss burden as an important factor in carriers’ decisions to withdraw from the market, and in other carriers’ decisions to not enter the market.

The following chart displays ERP loss ratios both in total and for ERPs located in rate subsidized territories for each carrier. Overall ERP loss ratios by company range from a low of 71% (Company T) to a high of 195% (Company R).



Involuntary Market Structures

In all states, there is some sort of mechanism that provides insurance to those drivers that cannot obtain insurance from insurers directly. The category of drivers in this situation is often referred to as the involuntary market. In states other than Massachusetts, the involuntary market is generally relatively small (usually under 5%), and separate, higher rates are charged to involuntary risks. In general, insurers' abilities in these other states to charge the rates required to make each driver potentially profitable means that the involuntary market consists only of those drivers whose potential for loss is so high that insurers do not wish to offer them coverage, even at a rate calculated to cover the expected losses of voluntary market risks as a whole.

There are three primary involuntary market structures for PPA insurance: Assigned Insurance Plans (AIPs), Joint Underwriting Associations (JUAs) and Reinsurance Facilities (RFs). The mechanism in Massachusetts, CAR, is a reinsurance facility. A comparison of the three types of involuntary markets is as follows:

Structure	# of States	Format	Rates	Individual Drivers	Percent of Market	Deficits (Millions)
AIP	42	Individual risk assigned to individual carriers based on voluntary market share	AIP Rates	Rejected by carriers, forwarded to AIP for assignment	<5%	N/A
JUA	5	Limited number of servicing carriers, pooled operating results shared by member companies based on voluntary market share	JUA Rates	Rejected by carriers, forwarded to servicing carriers	<5%	(\$2) – \$21
RF (CAR)	3	All insurers are servicing carriers, pooled operating results shared by member companies based on voluntary market share (adjusted for credits)	Commissioner Rate	Ceded by carrier – insured may not know if risk is ceded (involuntary) or retained (voluntary)	7.4%	\$323 (MA) \$0 - \$135 (Other)

AIPs are the most prevalent involuntary market structure. There are two key advantages to this structure. First, rates are generally adequate, and higher than most rates in the voluntary market. This provides incentives for drivers insured in AIPs to improve their driving records, so that they can move to the voluntary market and reduce their insurance rates. Second, since individual drivers are assigned to a carrier, that carrier has a strong incentive to effectively manage the losses from the driver.

JUAs have a similar advantage as AIPs, related to rates. Since the losses from JUAs are pooled and shared proportionately by carriers in relation to their market shares, there is less incentive for claims management under the JUA structure. However, this mechanism is useful for markets where specialized expertise is needed for a segment of the involuntary market.

For both AIPs and JUAs, there are several drawbacks. One is that the driver faces the “stigma” of being rejected by carriers and placed in the involuntary market. In addition, higher rates may lead to affordability issues. Also, although higher rates are charged to the involuntary market drivers, coverage options may be restricted.

Reinsurance facilities, such as the involuntary market in Massachusetts, address these drawbacks. First, drivers in an RF are unaware that they are in the involuntary market. In Massachusetts, carriers may not reject a driver except in extreme circumstances and may not notify a driver of the voluntary or involuntary status of a policy. Second, rates and coverage options are the same as in the voluntary market. However, the disadvantages of an RF are that the rates are generally inadequate, thereby generating a deficit that needs to be allocated to carriers, and they do not provide drivers with incentives to improve their driving record. In the only three other states that used RFs in 2000, the deficit in North Carolina was \$135 million, while New Hampshire and South Carolina had no material deficits. At the same time, in Massachusetts CAR ran the highest deficit in the country, at \$323 million.

While Massachusetts has most aspects of a reinsurance facility, there is an AIP-type component in the ERP mechanism. That is, a relatively large portion of the residual market business is allocated to carrier. However in Massachusetts this allocation is on an agency-by-agency basis, rather than risk-by-risk. The inherent volatility in allocating these blocks of business, especially to smaller insurers, has lead to a disproportionate allocation of the “low loss ratio” and “high loss ratio” ERP business among carriers.

The involuntary market in Massachusetts, as measured by the number of risks ceded to CAR, is approximately 7.4% of all drivers. In contrast, in 1990 55% of all Massachusetts drivers were ceded to CAR. A primary reason for the decline in the size of the Massachusetts involuntary market over this time period are the secondary incentives of financial penalties and credits in determining each carrier’s share of the deficit. However, this method of allocating the CAR deficit to carrier, in conjunction with the method of assigning ERPs to carrier, has caused very adverse financial results for certain companies.

Other CAR Functions

In addition to managing the involuntary market and allocating the deficits to carriers, CAR has two primary functions: (1) the designation, discipline, and allocation of ERPs, and (2) the audit oversight of individual carriers' claims handling practices.

As noted above, 64 ERPs based in under-priced territories have an average agency loss ratio above 150%. Further, an additional 23 ERPs based in over-priced territories have loss ratios in this range. This loss ratio performance is well in excess of what would be expected solely as a function of rate subsidies. While the carriers to which these ERPs are assigned have financial incentives to control costs from these agencies, other factors appear to be influencing the ERPs' financial results.

One of these factors is claims frequency, or the ratio of the number of claims to the number of cars insured. One of the primary factors that drives the rates is the number of claims that occur by territory. We therefore studied the frequency (measured as claims per 100 insured vehicles) of bodily injury (BI) claims and property damage liability (PDL) claims, and how they varied by territory and driver class. In general, an automobile accident that resulted in damage to another person's property results in a PDL claim for the at-fault driver. If another person is injured by that accident, a BI claim is generated for the at-fault driver. Note that the accidents are allocated to where the at-fault driver garages the vehicle (rather than the location of the accident). For PDL on a statewide basis, there are on average annually 6.8 PDL claims for every 100 vehicles, and 32% of these accidents generate a BI claim, for an average annual 2.2 claims statewide. A comparison of the statewide BI frequency to the most highly subsidized territories is shown below. In addition, we show the BI frequencies for several other cities and towns that are either only slightly subsidized (Quincy and Worcester) or over-priced (Foxboro and Harwich).

City/Town	Average # BI Claims/100 Insured Vehicles
Boston	6.4
Lawrence, Chelsea	8.7
Brockton, Everett, Lynn, Revere, Springfield	5.5
Quincy	2.6
Worcester	2.9
Foxborough	1.3
Harwich	0.9
Statewide	2.2

A final area of oversight for CAR is to maintain a program of performance standards for the handling and payment of claims by carriers. These standards fall into two general categories: (1) required policies and procedures for carriers' claims operations, and (2) claim handling requirements on individual claims.

CAR's individual claim handling requirements emphasize tasks related to prompt handling and appraisal criteria for certain types of claims (primarily first-party physical damage claims and personal injury protection (PIP)). There is also substantial emphasis on the thorough investigation of suspected fraudulent claims for all claim types. However, these guidelines neither sufficiently monitor the quality of claim handling, nor do they provide for an objective assessment of claim handling practices relative to well defined benchmarks. In addition, there should be greater emphasis on evaluating claim handling practices for third party bodily injury claims, such as litigation management and claim settlement outcomes.

Summary

Overall, the Massachusetts PPA insurance market since 1990 has seen a significant reduction in the number of carriers (53 down to 19, for a reduction of 64%), while at the same time, the number of insured cars has increased by 20%. The proportion of drivers insured in CAR dropped from 55% to 7.4%.

There appear to be barriers for carriers to enter the Massachusetts PPA market, and incentives for certain carriers to withdraw from the market, including the following.

- **ERPs:** The assignment of these agencies to carriers creates a disproportionate financial burden on some carriers. There is the potential of significant adverse financial results due to the assignment of ERPs, because individual carriers have significantly varying overall ERP loss ratios.
- **Rate Level Adequacy:** The rate-setting process in Massachusetts is intended to produce an “adequate” rate for the industry overall. However, different carriers have varying overhead expense structures and varying rates of return targets. Therefore, a rate that is adequate for all carriers on average will be inadequate for some carriers. In addition, given the rate subsidization by territory, carriers’ whose distribution of drivers is more heavily weighted towards the under-priced territories than average will have overall rates that are inadequate, all else equal. The ERP assignment process significantly limits a carrier’s ability to control its distribution of business by territory.
- **CAR Deficit Allocation:** Carriers with inadequate rates or very high loss ratio ERPs will have a financial incentive to utilize the involuntary market more than average. However, CAR’s rules severely penalize carriers for over-utilizing the involuntary market. Therefore, a carrier with a higher than average ERP burden may face both inadequate rates and a larger share of the CAR deficit.

- Barriers to Exit: CAR's rules that allocate the deficit contain two primary barriers to exit. First, a carrier that reduces its non-ERP business by more than 20% per year is severely penalized in its share of the deficit. Second, any carrier that wishes to withdraw completely from the Massachusetts PPA market must pay its current share of the CAR deficit for an additional three years. This "buy-out" fee has been paid by 30 carriers since 1990.

FINDINGS AND ANALYSIS

Our major findings and observations are summarized in this section. Additional details underlying these findings are contained in the Appendices. Further information related to the current structure of the market is contained in the Background section.

MARKET STRUCTURE AND CHARACTERISTICS

1. Rate Structure

There is significantly less rate variation among risks in Massachusetts PPA than in other similar states. Rates for urban areas are significantly higher than rural and suburban areas in all states reviewed except for Massachusetts. Similarly, other states show large differentials between adult and youthful operators and within the youthful category, between males and females. In Massachusetts PPA, significantly smaller (or no) rating differences exist among these classes of insureds. Rates charged to various types of drivers in Massachusetts do not properly reflect the differences in their loss experience. Based on the states included in our review, and our experience with the rate structure in other jurisdictions, we believe that Massachusetts' approach to rate flattening among classes and territories is unique.

We provided a comparison of how premiums varied among several states. We compiled premium quotes from three of the top five insurers in each of six other states (California, Connecticut, Illinois, Maryland, New York, and Pennsylvania) from internet-based sources. While no two states are exactly comparable for all dimensions, these states were chosen by the DOI as relevant to the comparisons due to the size, urban density, weather, and road conditions of their states. Within each state, rate comparisons were compiled for one urban area, one suburban area, and one rural area. We also chose four "driver profiles" for comparison: a youthful male principal operator, a youthful female principal operator, an adult female, and a male senior citizen. Details of the premium comparisons are shown in Appendix A.

Some results were common to all states: urban areas had higher premiums than rural areas, and youthful operators had higher premiums than their elders. In both of these cases, though, the difference in rates was less in Massachusetts than in the other states. We note that the lower differentials in Massachusetts are driven primarily by the cross-subsidies built into the rates. The subsidies by driver class (charging the youthful operators less than their true costs) is unique to Massachusetts. While there are states that have some implicit or explicit rate subsidy by territory, the magnitude of these other states' subsidies is significantly less than in Massachusetts.

For an example of the lower differential in Massachusetts by territory, Appendix A, Page 3 shows that in Massachusetts, urban rates for youthful drivers are 5% higher than suburban rates and 26% higher than rural rates, with no distinctions made for gender. Other states showed significantly higher relativities for urban youthful drivers. For example, the relativities between rural and urban drivers in other states range from 59% to 294%, as compared to Massachusetts' 26%.

Appendix A, Page 4 shows that Massachusetts has the lowest differential for youthful drivers over adult drivers, and has the highest differential for adult drivers over senior citizens. Massachusetts has a statutory 25% discount for senior citizens, while in other states, insurers often offer no discount, and in New York insurers actually charge senior citizens more than other adults.

Appendix A, Page 5 measures the percent by which youthful female and youthful male drivers' premiums exceed adults' premiums in urban areas. In Massachusetts, this differential is under 50%, while in the six comparison states, youthful males pay at least twice the premium paid by their adult counterparts. In five of the six other states, youthful females similarly pay at least 100% above the adult rate. For Connecticut, the youthful female differential is over 60%.

Only one of the states in our comparison (Pennsylvania) also prohibits premium differences by gender. In the remaining five states we studied, the differential for youthful males over youthful females ranged from 25% to 41%, averaged across all three geographical areas. Additional details of the premium comparison calculations can be found in Appendix A, pages 6 through 9.

2. Rate Subsidization

There is significant rate subsidization in Massachusetts PPA. Generally,

- a. certain urban risks, youthful operators, and youthful males are charged premiums below, often significantly, the costs associated with providing PPA coverage, and
- b. the rating shortfall on these classes is made up by overcharges on other risks.

This rate subsidization results in a relatively small segment of the drivers significantly underpriced, while the remaining drivers are charged rates that are higher than their costs of insurance coverage. The Massachusetts PPA system includes significant redistribution of premium among drivers. While there may be limited cross-subsidization by territory in some other states, the magnitude of the subsidization in Massachusetts is significantly greater than elsewhere, and the class subsidies found in the Massachusetts rating system are unique in the country.

The significant interclass and territory subsidies result in segments of the market that would be unprofitable for insurers to write. To counteract this effect, artificial incentives are used to encourage insurers to pursue all classes of business instead of avoiding the underpriced areas in favor of the overpriced categories. These artificial mechanisms include participation credits offered by CAR, penalties for over-ceding, and mandated distribution of certain producer types among carriers.

In general, in Massachusetts rates are set well below the indicated cost in urban areas, and are set above cost elsewhere. Similarly, youthful or inexperienced drivers' rates are subsidized, with corresponding overcharges for more experienced drivers. The rates are set so that the aggregate amount of undercharging in the subsidized classes and territories is exactly offset by overcharges in other classes and locations. The Massachusetts system includes significant redistribution of premium among insureds.

About 14% of the state's drivers are subsidized (i.e., their insurance premiums are less than the expected costs of providing the coverage), and 86% of the market pays more than the cost-based premium. Many of the under-priced risks are significantly under-priced, while most of the over-priced areas are only slightly over-priced.

Data published by the Automobile Insurers Bureau of Massachusetts (AIB) related to 2003 rates, shows the dollar amount and percentage under- or over-pricing by class and territory. Based on that publication, we display in Appendix B various findings related to these subsidies.

Note that the 360 cities and towns used in rating are grouped into 27 territories, which are re-configured every other year based on relative claims experience. Territories 27 and 1 through 16 are groups of not necessarily contiguous towns and cities outside of Boston. Territory 27 is the lowest-cost territory, Territory 1 is the next lowest, and Territory 16 the highest. The ten Boston territories (17 through 26) are defined based on neighborhood. The current territorial definitions are shown in Appendix B, Pages 18 and 19.

There are nine classes used for rating in Massachusetts. We note that the number of rating classes in Massachusetts is significantly smaller than what is used in other states. A standard class plan used by many carriers outside of Massachusetts may have hundreds of classes. The nine classes used here are as follows:

- 10 – Over 6 years of driving experience
- 15 – Senior citizen
- 17 – Principal Operator, 3-6 years of experience
- 18 – Occasional Operator, 3-6 years of experience
- 20 – Principal Operator, 0-3 years of experience, no driver training
- 21 – Occasional Operator, 0-3 years of experience, no driver training
- 25 – Principal Operator, 0-3 years of experience, driver training
- 26 – Occasional Operator, 0-3 years of experience, driver training
- 30 – Business Use Only

Although only these nine classes are used in rating in Massachusetts, data is collected for business within each class based on age and gender of the driver, which allows calculations of subsidies within a rating class. The sub-categories within the nine classes are (1) adult operator (25 years and up), (2) youthful male occasional operator, (3) youthful male principal operator, and (4) youthful female operator.

Appendix B, Page 2 shows the degree of subsidy, measured in dollars, that applies on average to the drivers in each class/territory combination.

This chart shows that non-urban experienced drivers (generally in the upper left of the chart) are slightly over-priced (by less than \$100), while certain urban inexperienced drivers (generally the lower right) are greatly under-priced (by over \$500).

This chart shows the subsidies in the rates by driver class and territory. However, some of the class/territory combinations on this page represent relatively few drivers. Appendix B, Page 3 shows the drivers in each class/territory segment of the market aggregated into a single-bar chart to show, for example, that although the chart on Page 2 shows many of the market segments have premiums subsidized by over \$500, the risks in these segments constitute only 4.1% of Massachusetts drivers. Overall, 86% of the market is subsidizing the remaining 14%.

In order to show where in the state rates are under-priced versus over-priced relative to their costs, we have produced maps that reflect the data shown on Page 2 of Appendix B. The map on Page 4 of Appendix B displays the subsidization in dollars averaged across all classes within the territory (note that the Boston average was calculated across Territories 17 through 26). This map shows that the heavily subsidized areas are concentrated in only a few localized areas of the state (Boston and some of the surrounding cities, Brockton, Lawrence, and Springfield).

Similar dollar subsidy maps are produced for three selected driver classes (each of these represents a single column of the chart on Page 2), as shown on Pages 5 through 7. These three example classes are:

- Page 5 - drivers with over six years experience who are over 25 years of age – the most populous class in the state (Class 10AD)
- Page 6 - senior citizens (Class 15)
- Page 7 - youthful principal operator with 0-3 years of experience and no driver training (Class 20YD)

The Class 10AD and Class 15 maps look similar to the average, showing slightly more over-pricing outside the urban areas and slightly less under-pricing in certain urban areas. The 20YD map shows subsidized rates for youthful, inexperienced operators in all areas of the state, with the more densely populated communities of Massachusetts subsidized by at least \$500.

The charts and maps discussed above carry the implicit assumption that the overall average 2003 fixed and established rate is adequate. If the perception of the industry is that rates are inadequate, then the view of the proportion of the state that is over-priced or under-priced will vary from the 86% / 14% split noted above. We recalculated the percentage and dollar subsidies twice, once assuming a rate inadequacy of 5% and again assuming 10%. The results are shown on Pages 8 and 9 of Appendix B. If rates are 5% inadequate, the split becomes 79% over-priced/ 21% under-priced

Since the rate subsidies are set so that a large majority of drivers pay a small surcharge (so that a small portion of drivers can receive a large subsidy), if the perception is that rates are 10% inadequate, then only 25% of the market is over-priced, rather than 86%.

Our review of the subsidies in the rates was based on a comparison of the fixed-and-established rates by class and territory, to the cost-based rates by class and territory. One of the primary factors that drives the cost-based rates is the number of claims that occur by

territory. We therefore studied the frequency (measured as claims per 100 insured vehicles) of bodily injury (BI) claims and property damage liability (PDL) claims, and how they varied by territory and class. In general, an automobile accident that resulted in damage to another person's property results in a PDL claim for the at-fault driver. If another person is injured by that accident, a BI claim is generated for the at-fault driver. Note that the accidents are allocated to where the at-fault driver garages the vehicle (rather than the location of the accident). For PDL on a statewide basis, there are on average annually 6.8 PDL claims for every 100 vehicles, and 32% of these accidents generate a BI claim, for an average annual 2.2 claims statewide. Appendix B, Pages 10 and 11, show the number of BI claims per PDL claim across the state. We note that the areas of Massachusetts that generate the highest number of BI claims per PDL claim are the same as the areas that are the most highly subsidized. Page 10 shows a map of the relative frequencies for all classes combined, while Page 10 shows a map related to one of the inexperienced classes.

Further details of the rate subsidy and frequency calculations are shown on Pages 12 through 17 of Appendix B.

INVOLUNTARY MARKET ANALYSIS

3. Results by Producer

There appears to be significant and systematic variation in recent loss ratios among individual producers. This result is especially pronounced for the ERP category. A subset of ERPs produces loss ratios that are similar to the loss ratios produced by non-ERPs (we refer to this subset of producers as “low loss ratio ERPs”). We also found that a segment of the ERPs produced loss ratios well in excess of the level one would expect based on the current rating structure (we refer to this segment of the ERP category as “high loss ratio ERPs”).

The underlying causes of these systematic differences are not explained by our analysis. However, we suspect that the low loss ratio group includes producers that were formerly voluntary agents, but became ERPs upon the departure from the Massachusetts PPA market of their prior voluntary market(s). It is commonly believed in the Massachusetts PPA industry that at least some of these producers may have retained their ERP status as a means for carriers to “manage” the impact on them of CAR’s ERP subscription rules. While the data available for our analysis does not allow explicit testing of this market perception, it is clear that the insurers writing the business produced by these low loss ratio ERPs are advantaged by them.

The implications of these relatively large segments of the ERP population with systematically better and worse than average results are significant. CAR’s current Rules of Operation call for ERP-produced business to be distributed relatively equally among the Commonwealth’s insurers according to each insurer’s market share. We found that while the total ERP market is close to evenly distributed, the low loss ratio and high loss ratio ERPs are not. Several carriers have significantly less of the high loss ratio ERP business assigned to them than their market share would indicate, and the other carriers have relatively higher shares of this ERP category.

This issue, combined with CAR's rules that penalize cessions, has caused the perception among many insurers (i.e., those with a relatively large share of the high loss ratio ERPs) that the burden of the involuntary market in Massachusetts is not equally shared among carriers. The data we have reviewed indicates that, under the current system, carriers with a relatively high share of the high loss ratio ERPs have virtually no chance to earn a profit writing Massachusetts PPA business, and that carriers with disproportionately large shares of low loss ratio ERPs are almost assured a profit on their PPA business.

We reviewed loss ratios for the 2000 through 2002 period for each individual producer in the state. The distribution of individual agencies' loss ratio is shown on Appendix C, Page 2. Agencies with loss ratios from 40% to 70% wrote 74% of the market in 2000 through 2002. There is a small but significant number of exposures that were associated with agencies with very high loss ratios.

We split the agencies into three groups: ERPs in high loss ratio territories (Territories 15 and 16, and 6 of the 10 Boston territories), ERPs in low loss ratio territories (the remaining 19 territories), and non-ERP agencies. The distributions for the three groups are compared on Pages 3 and 4 of Appendix C.

We have compared the three-year (2000 to 2002) loss ratios of the three groups of agencies to the loss ratio that would be expected based on the subsidies in the rates analysis. For non-ERPs, almost all of the business is generated by agencies with loss ratios less than 70%, and the overall loss ratio is more favorable than what would be expected based on the subsidies in the rates (average actual loss ratio of 58% versus an expected ratio of 68%). For ERPs writing in low loss ratio territories, 72% of the agencies generate an aggregate loss ratio about the same as expected, while 28% of these ERPs have an aggregate loss ratio of 129%, which is well in excess of expectations.

For the third grouping, ERPs in high loss ratio territories, only 20% of the business is with agencies with loss ratios under 100%, 35% have loss ratios between 100% and 150%, and 45% of the business is in agencies with loss ratios over 150%. The average ratio for this

group is 153%, which is significantly greater than the expected loss ratio for this group of 103%.

This analysis indicates that for a small portion of ERPs in low loss ratio territories, and most of the ERPs in high loss ratio territories, there is significant adverse experience that is not explained by the subsidies in the rates.

4. ERP Impact by Carrier

ERP results by individual carrier vary significantly, both by number of ERP produced exposures and by loss ratio. In general, most larger carriers have about the same proportion of ERP business as their market share, while subscription levels for some smaller carriers can fluctuate more widely. This is a result of the CAR system of assigning producers (instead of risks), which opens up the possibility that a slightly undersubscribed carrier can become a greatly oversubscribed one with the assignment of one additional ERP, or that an adequately subscribed carrier could become significantly under-subscribed if one ERP is removed. At various points during 2003, there were small carriers that had about 40% more ERP business than their market share would indicate. Also, the underwriting loss produced by a high loss ratio ERP can have a material effect on a company, especially a small one.

The distributions noted above relate to all ERP business. The ERP business in the most subsidized areas of the Commonwealth are less evenly distributed to carrier. For 2002, some carriers have less than half of their market share's proportion of the ERP business from the most subsidized areas, while others have more than double their market share of this business. The high loss ratio ERP business is also distributed unevenly to carrier.

We reviewed the proportion of each insurer's 2002 business written by the groupings of agencies, as shown on Page 5 of Appendix C. Overall, ERP "subscriptions" for most carriers are close to proportionate to their market shares (roughly 25% of business is written through ERPs, for most carriers). However, for the ERPs writing in the more subsidized areas, and for the high loss ratio ERPs, subscriptions can vary significantly from each carrier's market share. We found that two carriers wrote less than half their share of these ERPs, and two other carriers wrote more than double their share of these agencies, based on market share. Given the high losses generated by these categories of producers, the disproportionate distribution of ERPs in the higher loss ratio categories means that the ERP underwriting burden is not distributed proportionately among the state's insurers. Page 6 shows loss ratios by insurer, showing the wide variation by carrier of ERP loss ratio experience.

The DOI requested a listing of every ERP that wrote at least 50 policies in the high loss ratio territories, and experienced a three-year loss ratio in these territories over 120%. This listing is shown on Appendix C, Pages 7 and 8. Because agencies are not restricted to writing within any geographic areas, we show these ERPs' results for the other territories as well. Those 87 agencies on this list with the highest loss ratios are noted separately.

5. Other Involuntary Market Mechanisms

In most other states, the residual market is based on an “assigned insurance plan” or AIP. In these markets, drivers that cannot purchase insurance in the voluntary market are randomly assigned to carriers based on market share. The proportion of drivers in AIPs varies by state, but it is generally nominal (under 5% of the market). The rates for the AIPs are usually higher than the rates for the voluntary market, so there are incentives for AIP-insured drivers to find coverage in the voluntary market. In contrast, in Massachusetts the size of the residual market is relatively large, rates in CAR are identical to rates in the voluntary market, and insureds are not aware that they are in the residual market. Note that in 2000, \$454 million of Massachusetts PPA premium was ceded to CAR.

In contrast to an AIP, where individual drivers are randomly assigned to insurers, in Massachusetts, CAR randomly assigns entire agencies’ business to insurers. This assignment of potentially large books of business can result in a significant impact on the receiving carrier, especially if the assignment is of a relatively large, high loss ratio ERP.

CAR is a unique residual market for PPA in the United States. Most other states (plus Washington DC) have assigned insurance plans (in 42 states), joint underwriting associations (in 5 states), reinsurance facilities (2 states), or state funds (one state). A description of these mechanisms, and a comparison of CAR to the assigned risk plan structure is shown in Appendix D.

6. CAR Claims Oversight Review

In response to the range of loss ratios by carriers and agencies, the DOI requested a review of the claims handling oversight role of CAR. Tillinghast's claims division reviewed CAR's claim performance guidelines, performed an assessment of how CAR oversees servicing carriers' compliance with these guidelines, and compared the guidelines to Tillinghast's view of industry best practices. The CAR guidelines fall into two general categories: (1) required policies and procedures for carriers' claims operations, and (2) claim handling requirements on individual claims. A comparison of CAR's guidelines to industry best practices is shown in Appendix E.

Our review of CAR's claims handling oversight role was based on interviews with key staff at the DOI and CAR, review of pertinent CAR reports, manuals, bulletins, rules, and related documents, and a review of a small sample of claim files from two servicing carriers previously audited by CAR to assess the application of CAR's review process

CAR lacks an effective process for monitoring ongoing compliance of servicing carrier's compliance with CAR policies and procedures. We believe CAR's policies and procedures guidelines address many of the key components of an effective process for ensuring prompt, fair and cost-effective claim settlements. CAR's monitoring of carriers' compliance with its non-fraud related policies and procedures guidelines is primarily achieved through a performance standard questionnaire that is updated too infrequently by the servicing carriers. Fraud policies and guidelines, although not updated, are reviewed more frequently with the servicing carriers. Neither fraud nor normal claim activities, however, are reviewed with the necessary frequency, or integrated, with claim file reviews, into a more broad based review process.

CAR's individual claim handling performance standards emphasize task measures and principally relate to prompt handling and appraisal criteria for first-party automobile physical damage claims and personal injury protection (PIP) forms management. There is also substantial emphasis on the thorough investigation of suspected fraudulent claims for all

claim types. However, these guidelines neither sufficiently monitor claim handling quality, nor do they provide for a quantitative assessment of claim outcomes on closed claims to be competitive with industry practices. In addition, there should be greater emphasis on evaluating the substantive claim handling components of bodily injury claims such as litigation management and claim settlement outcomes, consistent with industry best practices.

Individual claim files are reviewed, and a standard form is filled out for each claim, tabulating compliance with CAR's performance standards. This method produces a consistent scorecard among carriers but does not provide an assessment of the overall claim handling quality or effectiveness. The performance standards and forms should be expanded to reflect industry best practices.

As previously noted, CAR standards require servicing carriers to periodically submit answers to a questionnaire regarding carrier plans and procedures for areas such as fraud training, obtaining automobile parts discounts, reasonable labor rates, litigation management policies, etc. Generally, these questionnaires are completed by a new servicing carrier upon entry into the market, or in the event of substantive change in the performance standards' plan or procedure requirements. The most recent reports we reviewed were completed in 1995 and may or may not be representative of carriers' current structure.

CAR uses statistical data provided by the servicing carriers to evaluate their performance in areas executing specific plans and procedures. For example, CAR uses loss adjustment expense (LAE) data to detect adverse trends in loss adjustment expenditures and compare relative costs. This management information can be linked to the claim file review process by including an evaluation of settlement activities, litigation management and expense management, particularly legal expense in the audit process.

DISTRIBUTION AND USE

This report and the opinions and conclusions contained herein are being provided to the DOI solely for its internal use in connection with our analysis of the Massachusetts PPA market. It is not intended nor necessarily suitable for any other purpose.

We understand that the DOI may wish to provide this report to other parties. Permission is hereby granted for this distribution on the conditions that:

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- each Recipient recognizes that Tillinghast is available to answer any questions concerning the report;
- each Recipient agrees not to reference or distribute the report to any other party;
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This report contains workpapers, trade secrets, and confidential information and as such, it is not intended to be subject to disclosure requirements under any Freedom of Information Act.

The exhibits attached in support of our findings are an integral part of this report. These sections have been prepared so that our actuarial assumptions and judgments are documented. Judgments about the conclusions drawn in this report should be made only after considering the report in its entirety. We remain available to answer any questions that may arise regarding this report. We assume that the user of this report will seek such explanation on any matter in question.

Our conclusions and recommendations are predicated on a number of assumptions as to future conditions and events. Those assumptions, which are documented in subsequent sections of this report, must be understood in order to place our conclusions in their appropriate context. In addition, our work is subject to inherent limitations, which are also discussed in the report.

RELIANCES AND LIMITATIONS

Inherent Uncertainty

Some of the analyses performed rely on estimates of losses and allocated loss adjustment expenses (ALAE) for the various groups of carriers writing PPA in the Commonwealth. It must be understood that estimates of loss and ALAE liabilities are subject to large potential errors of estimation, due to the fact that the ultimate disposition of claims incurred prior to the financial statement date, whether reported or not, are subject to the outcome of events that have not yet occurred. Examples of these events include jury decisions, court interpretations and legislative changes; subsequent damage to property, and changes in the medical condition of claimants; public attitudes, and social and economic conditions such as inflation; as well as differences between carriers. Any estimate of future costs is subject to the inherent limitation on one's ability to predict the aggregate course of future events. It should therefore be expected that the actual emergence of losses and ALAE will vary, perhaps materially, from any estimate.

In addition, we have modeled potential effects on the various carriers of certain changes in the structure of the Massachusetts PPA market. We have made assumptions, documented in other sections of this report, regarding how certain carriers will react to changes in the market.

No assurance can be given that individual carriers' historical results or future actions will not ultimately vary, perhaps significantly, from the estimates and assumptions contained herein. In our judgment, we have employed techniques and assumptions that are appropriate, and the conclusions presented herein are reasonable, given the information currently available.

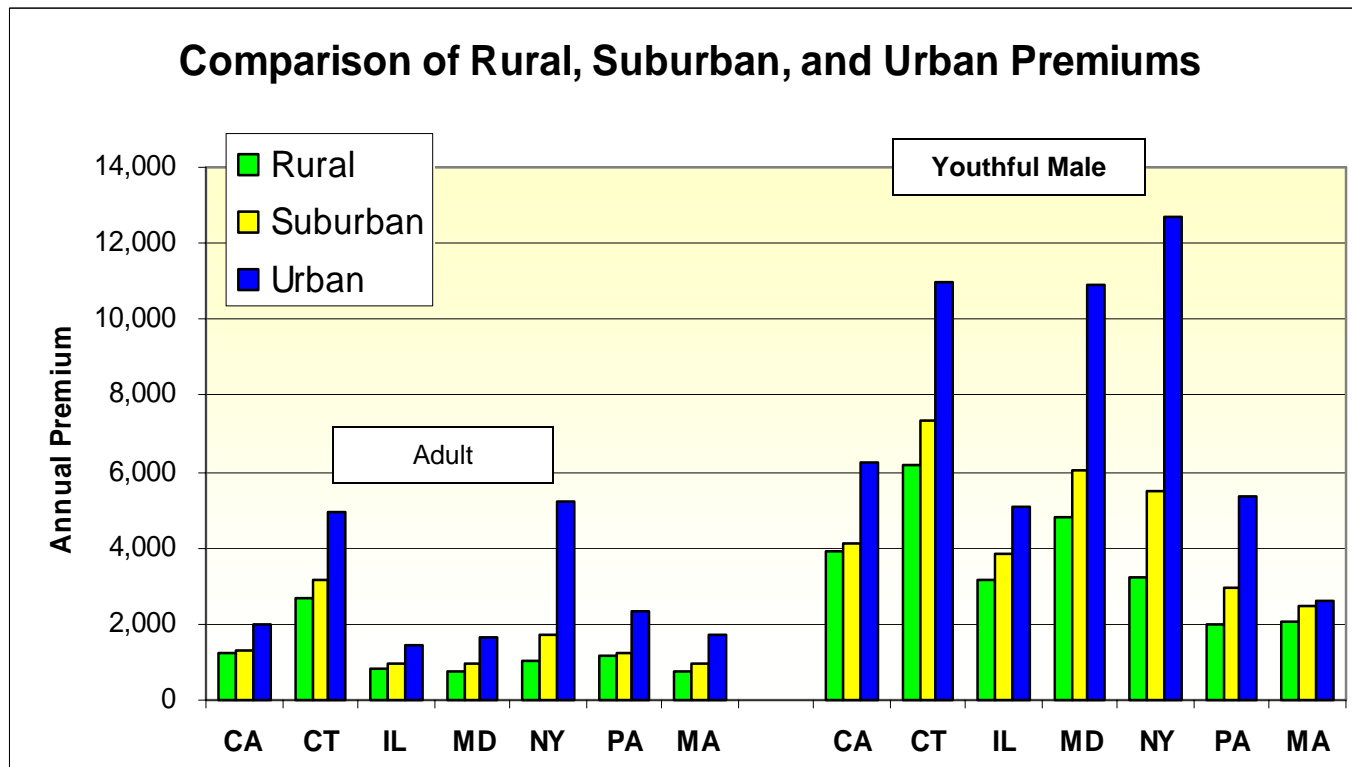
Data Reliance

In developing this report, we have relied, without audit or independent verification, on historical data and other quantitative and qualitative information supplied by various sources, including the DOI, CAR, the Automobile Insurers Bureau of Massachusetts (AIB), and various web-sites. We did, however, review the information for reasonableness and internal consistency. The accuracy of our results is dependent upon the accuracy and completeness of this underlying data; therefore, any material discrepancies discovered in this data should be reported to us and this report amended accordingly, if warranted.

Premium Comparisons

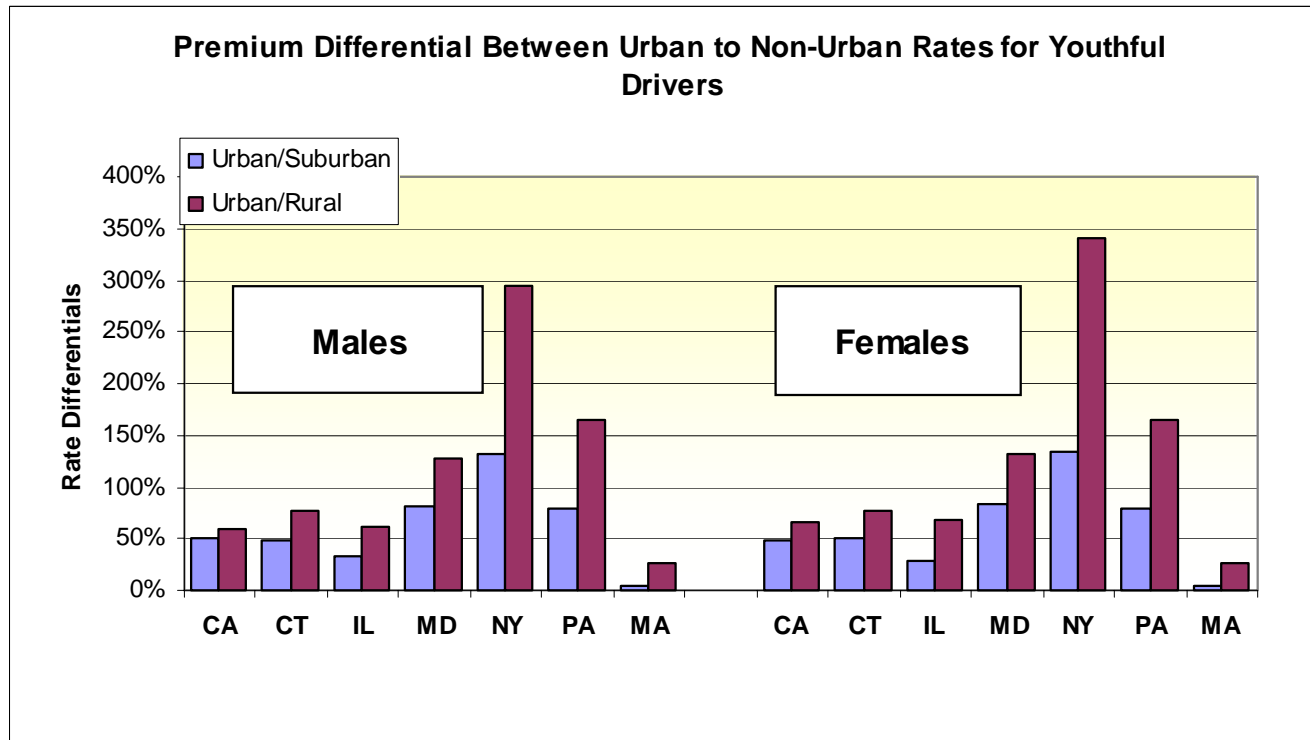
Appendix A

In Each State, Urban Rates are Highest, Rural Rates are Lowest



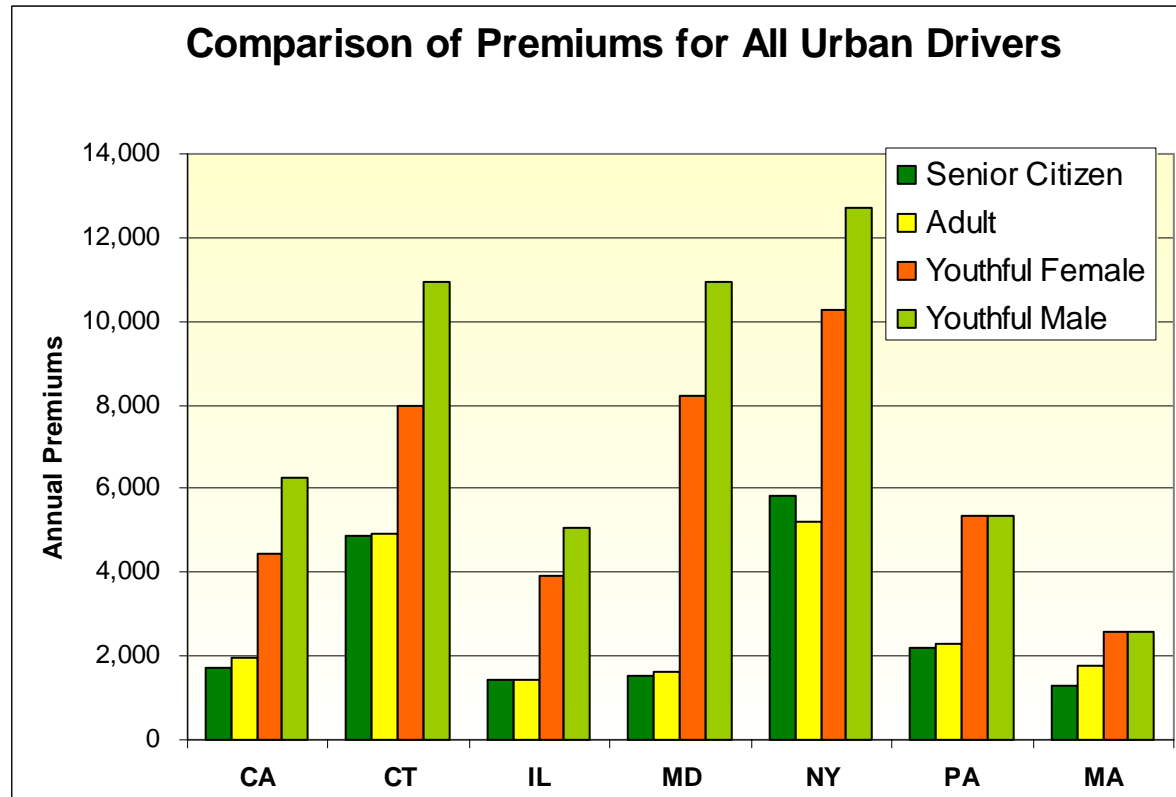
- Rural/urban differential is significantly tempered for youthful males in MA.

In All States, Rates for Young Urban Drivers are Higher Than in Rural or Suburban Areas. But the MA Differential is By Far the Smallest.



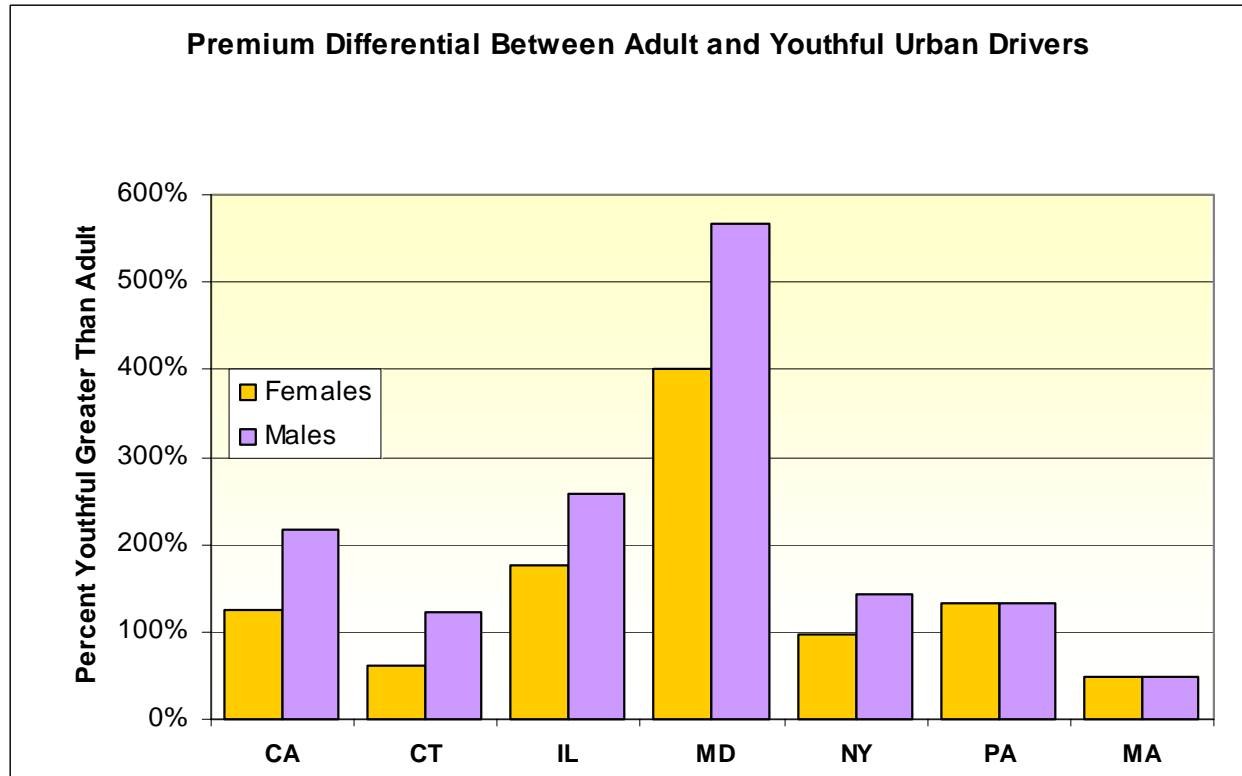
- Urban rates are greater than **SUBURBAN** rates by 33% to 132% (males) and by 29% to 134% (females) in the other six states. In MA, the differential is 5%.
- Urban rates are greater than **RURAL** rates by 59% to 294% (males) and by 65% to 340% (females) in the other six states. In MA, the differential is 26%.

In Urban Areas, Youthful Driver Rates are Highest, Senior Citizen Rates are Lowest.



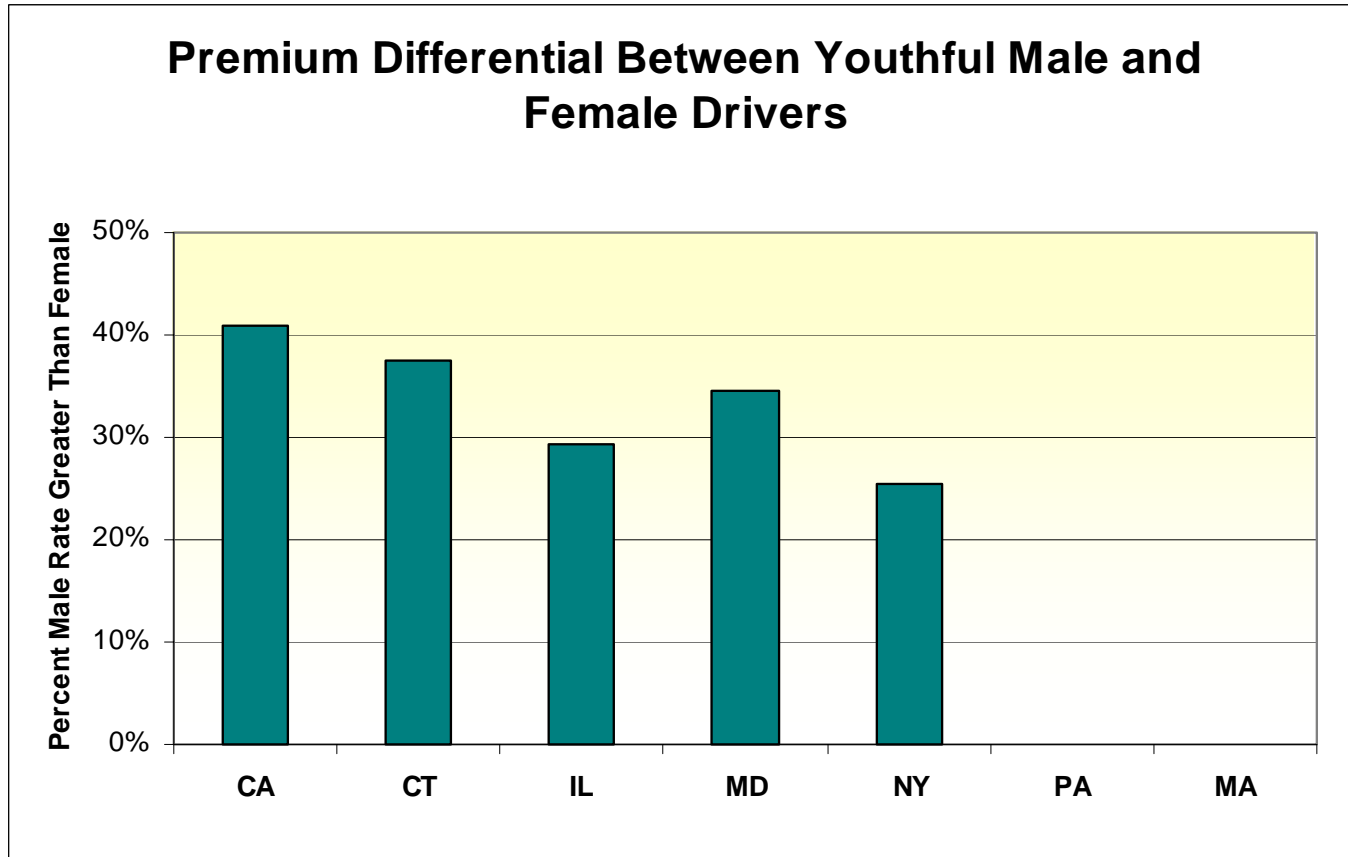
- Massachusetts differential between youthful and adult is lower than other six states, while differential between adults and senior citizens is higher in MA.

Outside MA, Youthful Drivers Pay Far More Than Adults



- Urban youthfuls in Mass pay proportionally much less than in the other six states.

In Most States, Young Males Pay Higher Premiums than Young Females



- Only Pennsylvania joins Massachusetts in the states reviewed in prohibiting varying rates by gender.

Data Sources

- AM Best
 - Market share of insurer groups within each state
 - Used to select carriers included in analysis

- Automobile Insurers Bureau of Massachusetts
 - 2003 Manual
 - Used to rate Massachusetts examples

- Various Websites
 - Individual carriers
 - Sites that quote premiums for multiple carriers

Notes for Premium Quotes

- Some carriers did not produce quotes for all risks
 - New York, Maryland, Illinois -- youthful operators
 - New Jersey -- No websites (single- or multiple-carrier), would quote any rates
- Quotes are for New Business
 - Renewal business may be eligible for additional discounts (e.g., claim-free)
 - New business may be eligible only for higher-rated tiers
- Massachusetts quotes are at manual rates
 - Reflect no discounts/deviations
- Premiums in graphs are simple averages of individual carriers' premium quotes
- Cities/Towns were selected by geography
 - Refinement could include census data

Additional Details

- Page 10
 - AM Best Market Shares by State

- Pages 11 and 12
 - Individual Premium Quotes

- Page 13
 - Profiles Used for Rating

Massachusetts Division of Insurance
Leading Auto Insurance Carriers By State

State	Rank	Carrier	Market Share	State	Rank	Carrier	Market Share	State	Rank	Carrier	Market Share
CA	1	<i>State Farm Group</i>	12.9%	MD	1	<i>State Farm Group</i>	19.0%	MA	1	Commerce Group Inc	22.9%
	2	<i>Zurich/Farmers Group</i>	11.9%		2	<i>Berkshire Hathaway Ins Group</i>	15.7%		2	Arbella Insurance Group	11.0%
	3	<i>Allstate Insurance Group</i>	10.5%		3	<i>Allstate Insurance Group</i>	14.5%		3	Safety Group	10.5%
	4	California State Auto Group	9.6%		4	Nationwide Group	11.5%		4	MetLife Auto & Home Group	7.6%
	5	Automobile Club of S. Calif Gr	8.6%		5	Erie Insurance Group	5.7%		5	Liberty Mutual Insurance Cos	6.9%
	6	Mercury General Group	7.7%		6	USAA Group	5.2%		6	Travelers/Citigroup Companies	6.7%
	7	American International Grp Inc	6.5%		7	Maryland Automobile Ins Fund	5.2%		7	Allmerica Prop & Casualty Cos	6.6%
	8	USAA Group	3.3%		8	Progressive Insurance Group	4.4%		8	White Mountains Insurance Grp	5.9%
	9	Berkshire Hathaway Ins Group	2.9%		9	CNA Insurance Companies	1.7%		9	Plymouth Rock Companies	4.0%
	10	Great American P&C Ins Group	2.0%		10	Liberty Mutual Insurance Cos	1.6%		10	Amica Mutual Group	3.2%
		All Other	24.0%			All Other	15.5%			All Other	14.7%
	Total		100.0%		Total		100.0%		Total		100.0%
CT	1	<i>Allstate Insurance Group</i>	12.6%	NY	1	Allstate Insurance Group	17.1%				
	2	<i>Berkshire Hathaway Ins Group</i>	8.4%		2	State Farm Group	12.8%				
	3	Travelers/Citigroup Companies	7.0%		3	<i>Berkshire Hathaway Ins Group</i>	12.1%				
	4	Nationwide Group	6.5%		4	Travelers/Citigroup Companies	6.6%				
	5	<i>Progressive Insurance Group</i>	6.5%		5	<i>Progressive Insurance Group</i>	5.6%				
	6	Hartford Insurance Group	6.3%		6	<i>Liberty Mutual Insurance Cos</i>	4.4%				
	7	Great American P&C Ins Group	4.9%		7	Nationwide Group	4.2%				
	8	MetLife Auto & Home Group	4.7%		8	Central Services Group	3.3%				
	9	Liberty Mutual Insurance Cos	4.3%		9	MetLife Auto & Home Group	2.8%				
	10	Amica Mutual Group	4.2%		10	American International Grp Inc	2.5%				
		All Other	34.4%			All Other	28.7%				
	Total		100.0%		Total		100.0%				
IL	1	State Farm Group	32.1%	PA	1	<i>State Farm Group</i>	18.7%				
	2	<i>Allstate Insurance Group</i>	11.4%		2	Allstate Insurance Group	14.1%				
	3	COUNTRY Ins&Financial Services	6.8%		3	<i>Erie Insurance Group</i>	13.5%				
	4	Zurich/Farmers Group	6.6%		4	<i>Nationwide Group</i>	11.1%				
	5	<i>American Family Insurance Grp</i>	5.0%		5	Progressive Insurance Group	5.8%				
	6	MetLife Auto & Home Group	2.9%		6	Travelers/Citigroup Companies	3.5%				
	7	<i>Berkshire Hathaway Ins Group</i>	2.4%		7	Prudential of America Group	2.2%				
	8	Liberty Mutual Insurance Cos	2.0%		8	USAA Group	2.1%				
	9	SAFECO Insurance Companies	1.9%		9	Berkshire Hathaway Ins Group	2.0%				
	10	Progressive Insurance Group	1.8%		10	Liberty Mutual Insurance Cos	2.0%				
		All Other	27.0%			All Other	25.1%				
	Total		100.0%		Total		100.0%				

Carriers used for premium comparisons are indicated in bold and italics.
Data provided by AM Best.

**Massachusetts Division of Insurance
Premium Quotes**

State	Region	Insured	Carrier	Premium Quote	State	Region	Insured	Carrier	Premium Quote	State	Region	Insured	Carrier	Premium Quote
CA	Urban	Youthful Male Without/With Good Student Discount	State Farm	\$4,359/\$3,268	CT	Urban	Youthful Male Without/With Good Student Discount	Allstate	\$12,630/N/A	IL	Urban	Youthful Male Without/With Good Student Discount	Deerbrook (Allstate)	\$4,702/N/A
			Farmers	8,868/6,710				Geico (Berk Hath)	7,402/N/A				American Family	6,199/4,751
			Allstate	7,130/N/A				Progressive	12,862/N/A				Geico (Berk Hath)	5,063/N/A
		Youthful Female Without/With Good Student Discount	State Farm	3,022/2,719			Youthful Female Without/With Good Student Discount	Allstate	8,685/N/A			Youthful Female Without/With Good Student Discount	Deerbrook (Allstate)	3,392/N/A
			Farmers	5,488/4,170				Geico (Berk Hath)	5,480/N/A				American Family	5,437/4,541
		Experienced Female	Allstate	5,702/N/A			Experienced Female	Progressive	9,818/N/A			Experienced Female	Geico (Berk Hath)	3,383/N/A
			State Farm	1,454				Allstate	7,370				Deerbrook (Allstate)	1,513
		Senior Male	Farmers	1,888			Senior Male	Nationwide	3,572			Senior Male	American Family	1,556
			Allstate	2,580				Progressive	3,850				Geico (Berk Hath)	1,198
			State Farm	1,097				Allstate	6,493				Deerbrook (Allstate)	1,603
		Suburban	Farmers	1,559			Suburban	Nationwide	3,408			Suburban	American Family	1,350
			Allstate	2,572				Progressive	4,718				Geico (Berk Hath)	1,321
			State Farm	3,361/2,520			Youthful Male Without/With Good Student Discount	Allstate	7,617/N/A			Youthful Male Without/With Good Student Discount	Deerbrook (Allstate)	4,242/N/A
			Farmers	5,318/4,029				Geico (Berk Hath)	5,658/N/A				American Family	3,925/3,002
			Allstate	4,822/N/A				Progressive	8,750/N/A				Geico (Berk Hath)	3,743/N/A
	Suburban	Youthful Female Without/With Good Student Discount	State Farm	2,328/2,094		Suburban	Youthful Female Without/With Good Student Discount	Allstate	5,138/N/A		Suburban	Youthful Female Without/With Good Student Discount	Deerbrook (Allstate)	3,440/N/A
			Farmers	3,305/2,514				Geico (Berk Hath)	4,192/N/A				American Family	3,440/2,869
			Allstate	3,864/N/A				Progressive	6,676/N/A				Geico (Berk Hath)	2,493/N/A
		Experienced Female	State Farm	1,118			Experienced Female	Allstate	3,997			Experienced Female	Deerbrook (Allstate)	1,201
			Farmers	1,140				Nationwide	2,816				American Family	969
		Senior Male	Allstate	1,732			Senior Male	Progressive	2,632			Senior Male	Geico (Berk Hath)	750
			State Farm	843				Allstate	3,470				Deerbrook (Allstate)	1,278
			Farmers	948				Nationwide	2,684				American Family	877
		Rural	Allstate	1,716			Rural	Progressive	3,202			Rural	Geico (Berk Hath)	842
			State Farm	3,501/2,620			Youthful Male Without/With Good Student Discount	Allstate	6,806/N/A			Youthful Male Without/With Good Student Discount	Deerbrook (Allstate)	3,445/N/A
			Farmers	5,285/3,999				Geico (Berk Hath)	4,862/N/A				American Family	2,646/2,024
			Allstate	4,058/N/A				Progressive	6,942/N/A				Geico (Berk Hath)	3,601/N/A
	Rural	Youthful Female Without/With Good Student Discount	State Farm	2,422/2,178		Rural	Youthful Female Without/With Good Student Discount	Allstate	4,599/N/A		Rural	Youthful Female Without/With Good Student Discount	Deerbrook (Allstate)	2,502/N/A
			Farmers	3,263/2,478				Geico (Berk Hath)	3,618/N/A				American Family	2,319/1,934
			Allstate	2,932/N/A				Progressive	5,276/N/A				Geico (Berk Hath)	2,395/N/A
		Experienced Female	State Farm	1,152			Experienced Female	Allstate	3,624			Experienced Female	Deerbrook (Allstate)	1,093
			Farmers	1,119				Nationwide	2,362				American Family	649
		Senior Male	Allstate	1,458			Senior Male	Progressive	2,126			Senior Male	Geico (Berk Hath)	814
			State Farm	873				Allstate	3,136				Deerbrook (Allstate)	1,161
			Farmers	924				Nationwide	2,250				American Family	561
			Allstate	1,454				Progressive	2,568				Geico (Berk Hath)	902
			State Farm											
			Farmers											
			Allstate											

**Massachusetts Division of Insurance
Premium Quotes**

State	Region	Insured	Carrier	Premium Quote	State	Region	Insured	Carrier	Premium Quote	State	Region	Insured	Carrier	Premium Quote
MD	Urban	Youthful Male Without/With Good Student Discount	State Farm	N/A/N/A	NY	Urban	Youthful Male Without/With Good Student Discount	Geico (Berk Hath)	\$12,869/N/A	PA	Urban	Youthful Male Without/With Good Student Discount	State Farm	\$5,416/\$4,716
			Geico (Berk Hath)	\$7,562/N/A				Progressive	12,806/N/A				Erie	5,532/N.A.
			Allstate	14,326/N.A.				Liberty Mutual	12,390/N/A				Nationwide	5,560/5,228
		Youthful Female Without/With Good Student Discount	State Farm	N/A/N/A			Youthful Female Without/With Good Student Discount	Geico (Berk Hath)	9,898/N/A			Youthful Female Without/With Good Student Discount	State Farm	5,416/4,716
			Geico (Berk Hath)	6,052/N/A				Progressive	12,468/N/A				Erie	5,532/N.A.
			Allstate	10,372/N.A.				Liberty Mutual	8,518/N/A				Nationwide	5,560/5,228
	Suburban	Experienced Female	State Farm	1,752		Suburban	Experienced Female	Geico (Berk Hath)	5,103		Suburban	Experienced Female	State Farm	2,028
			Geico (Berk Hath)	1,201				Progressive	8,052				Erie	2,848
			Allstate	1,976				Liberty Mutual	2,485				Nationwide	2,028
		Senior Male	State Farm	1,543			Senior Male	Geico (Berk Hath)	5,596			Senior Male	State Farm	1,818
			Geico (Berk Hath)	1,148				Progressive	9,450				Erie	2,896
			Allstate	1,873				Liberty Mutual	2,483				Nationwide	1,939
	Suburban	Youthful Male Without/With Good Student Discount	State Farm	N/A/N/A		Suburban	Youthful Male Without/With Good Student Discount	Geico (Berk Hath)	6,408/N/A		Suburban	Youthful Male Without/With Good Student Discount	State Farm	3,524/3,058
			Geico (Berk Hath)	4,443/N/A				Progressive	4,894/N/A				Erie	2,808/N.A.
			Allstate	7,686/N.A.				Liberty Mutual	5,132/N/A				Nationwide	2,893/2,716
		Youthful Female Without/With Good Student Discount	State Farm	N/A/N/A			Youthful Female Without/With Good Student Discount	Geico (Berk Hath)	4,914/N/A			Youthful Female Without/With Good Student Discount	State Farm	3,524/3,058
			Geico (Berk Hath)	3,552/N/A				Progressive	4,740/N/A				Erie	2,808/N.A.
			Allstate	5,392/N.A.				Liberty Mutual	3,553/N/A				Nationwide	2,893/2,716
	Rural	Experienced Female	State Farm	1,104		Rural	Experienced Female	Geico (Berk Hath)	1,080		Rural	Experienced Female	State Farm	1,282
			Geico (Berk Hath)	703				Progressive	2,966				Erie	1,426
			Allstate	1,000				Liberty Mutual	1,114				Nationwide	1,003
		Senior Male	State Farm	973			Senior Male	Geico (Berk Hath)	951			Senior Male	State Farm	772
			Geico (Berk Hath)	671				Progressive	3,652				Erie	892
			Allstate	967				Liberty Mutual	1,112				Nationwide	719
	Rural	Youthful Male Without/With Good Student Discount	State Farm	N/A/N/A		Rural	Youthful Male Without/With Good Student Discount	Geico (Berk Hath)	3,552/N/A		Rural	Youthful Male Without/With Good Student Discount	State Farm	2,266/1,962
			Geico (Berk Hath)	3,642/N/A				Progressive	2,900/N/A				Erie	1,866/N.A.
			Allstate	5,959/N.A.				Liberty Mutual	3,207/N/A				Nationwide	2,146/2,017
		Youthful Female Without/With Good Student Discount	State Farm	N/A/N/A			Youthful Female Without/With Good Student Discount	Geico (Berk Hath)	2,230/N/A			Youthful Female Without/With Good Student Discount	State Farm	2,266/1,962
			Geico (Berk Hath)	2,907/N/A				Progressive	2,802/N/A				Erie	1,866/N.A.
			Allstate	4,145/N.A.				Liberty Mutual	1,993/N/A				Nationwide	2,146/2,017
	Rural	Experienced Female	State Farm	910		Rural	Experienced Female	Geico (Berk Hath)	741		Rural	Experienced Female	State Farm	1,146
			Geico (Berk Hath)	575				Progressive	1,762				Erie	1,448
			Allstate	687				Liberty Mutual	663				Nationwide	974
		Senior Male	State Farm	801			Senior Male	Geico (Berk Hath)	657			Senior Male	State Farm	686
			Geico (Berk Hath)	549				Progressive	2,132				Erie	910
			Allstate	650				Liberty Mutual	661				Nationwide	681
	Urban	Youthful Male & Fem Experienced Female Senior Male	ALL			Urban	Youthful Male & Fem Experienced Female Senior Male	ALL			Urban	Youthful Male & Fem Experienced Female Senior Male	ALL	\$2,600/N/A
			ALL					ALL					ALL	1,746
			ALL					ALL					ALL	1,310
	Suburban	Youthful Male & Fem Experienced Female Senior Male	ALL			Suburban	Youthful Male & Fem Experienced Female Senior Male	ALL			Suburban	Youthful Male & Fem Experienced Female Senior Male	ALL	2,486/N/A
			ALL					ALL					ALL	952
			ALL					ALL					ALL	716
	Rural	Youthful Male & Fem Experienced Female Senior Male	ALL			Rural	Youthful Male & Fem Experienced Female Senior Male	ALL			Rural	Youthful Male & Fem Experienced Female Senior Male	ALL	2,059/N/A
			ALL					ALL					ALL	744
			ALL					ALL					ALL	558

Massachusetts Division of Insurance Risk Profiles and Locations

Policy Profiles

Youthful Operators:

BI/UM/UIM	50/100
PDL	25
Collision	\$500 Deductible
Comprehensive	\$500 Deductible
Automobile	1994 2-Door Honda Accord DX
Age	18
No Driver Training	
No Accidents or Violations	

Non-Youthful Operators:

BI/UM/UIM	100/300
PDL	50
Collision	\$500 Deductible
Comprehensive	\$500 Deductible
Automobile	1999 4-Door Honda Accord DX
Age	45 or 67
No Accidents or Violations	

Locations

California:

Urban	San Francisco
Suburban	Walnut Creek
Rural	Yountville

Connecticut:

Urban	Hartford
Suburban	West Hartford
Rural	Kent

Illinois:

Urban	Chicago
Suburban	Evanston
Rural	Atkinson

Massachusetts:

Urban	Terr 26 (East Boston/Charlestown)
Suburban	Terr 6 (eg, Carver, Newton, Sharon)
Rural	Terr 27 (Primarily W. Mass, Cape)

Maryland:

Urban	Baltimore
Suburban	Silver Spring
Rural	Taneytown

New York:

Urban	NYC (Brooklyn)
Suburban	Tarrytown
Rural	Trumansburg

Pennsylvania:

Urban	Philadelphia
Suburban	King of Prussia
Rural	Rome

Subsidies in the Rates

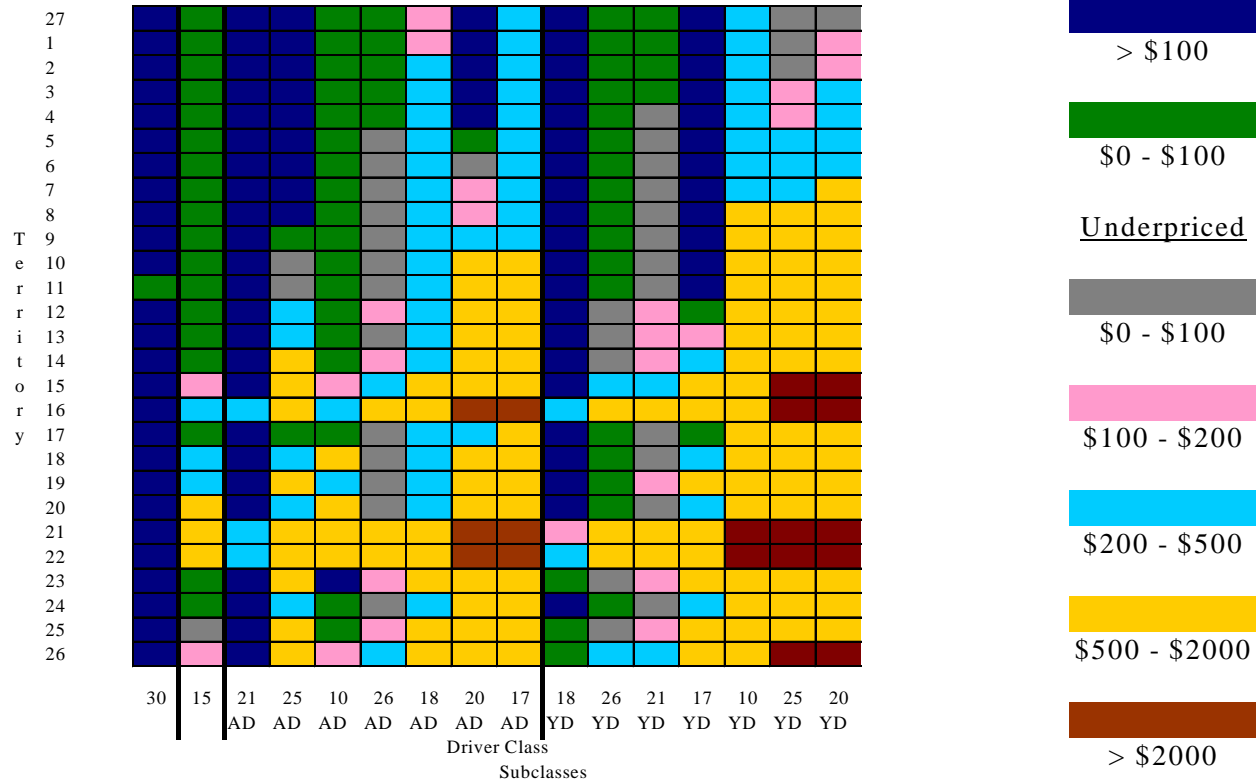
Appendix B

Dollar Rate Subsidies by Sub-Class/Territory Combination are:

MASS AUTO - 2003 PRIVATE PASSENGER

Estimated Rate Adequacy by Class & Territory

Assuming S/W Rate Level is Adequate



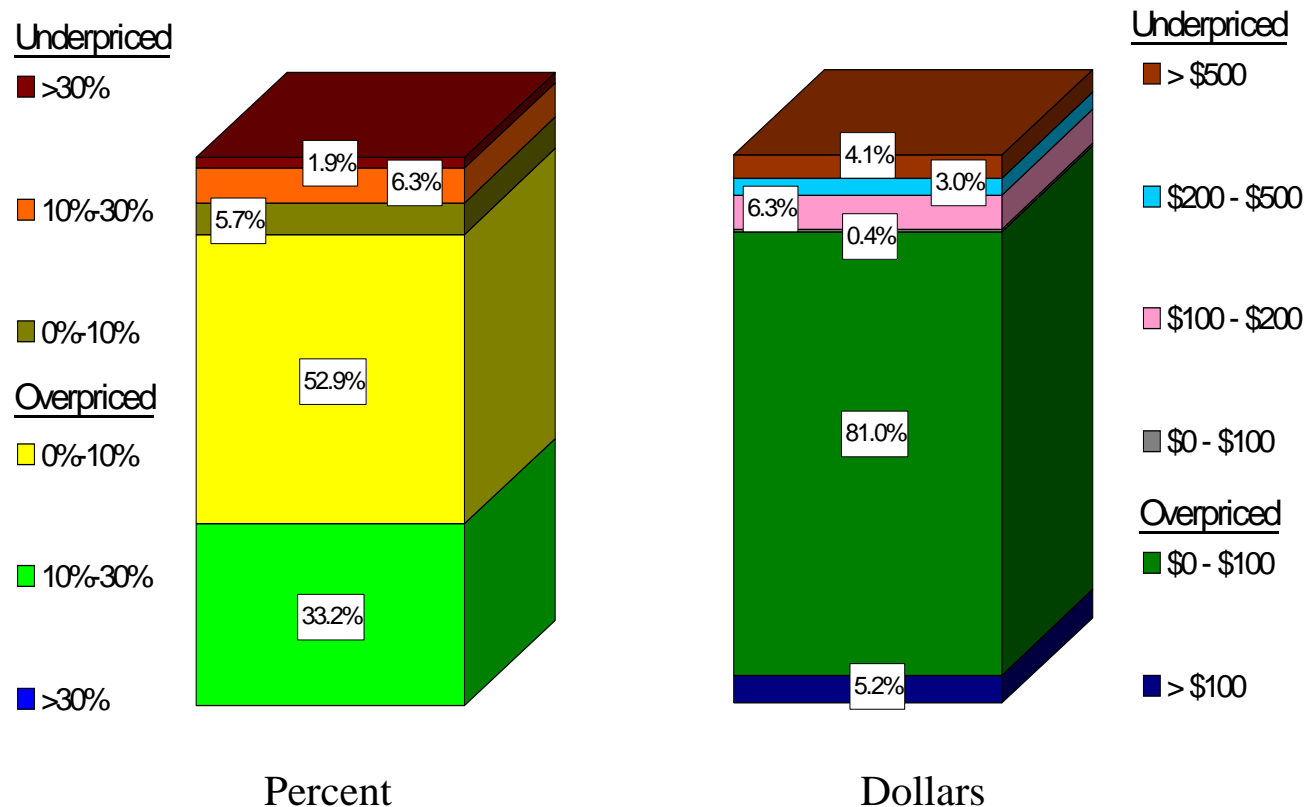
Based on 16 Subclasses

Percentage of Market at Various Subsidy Levels:

MASS AUTO - 2003 PRIVATE PASSENGER

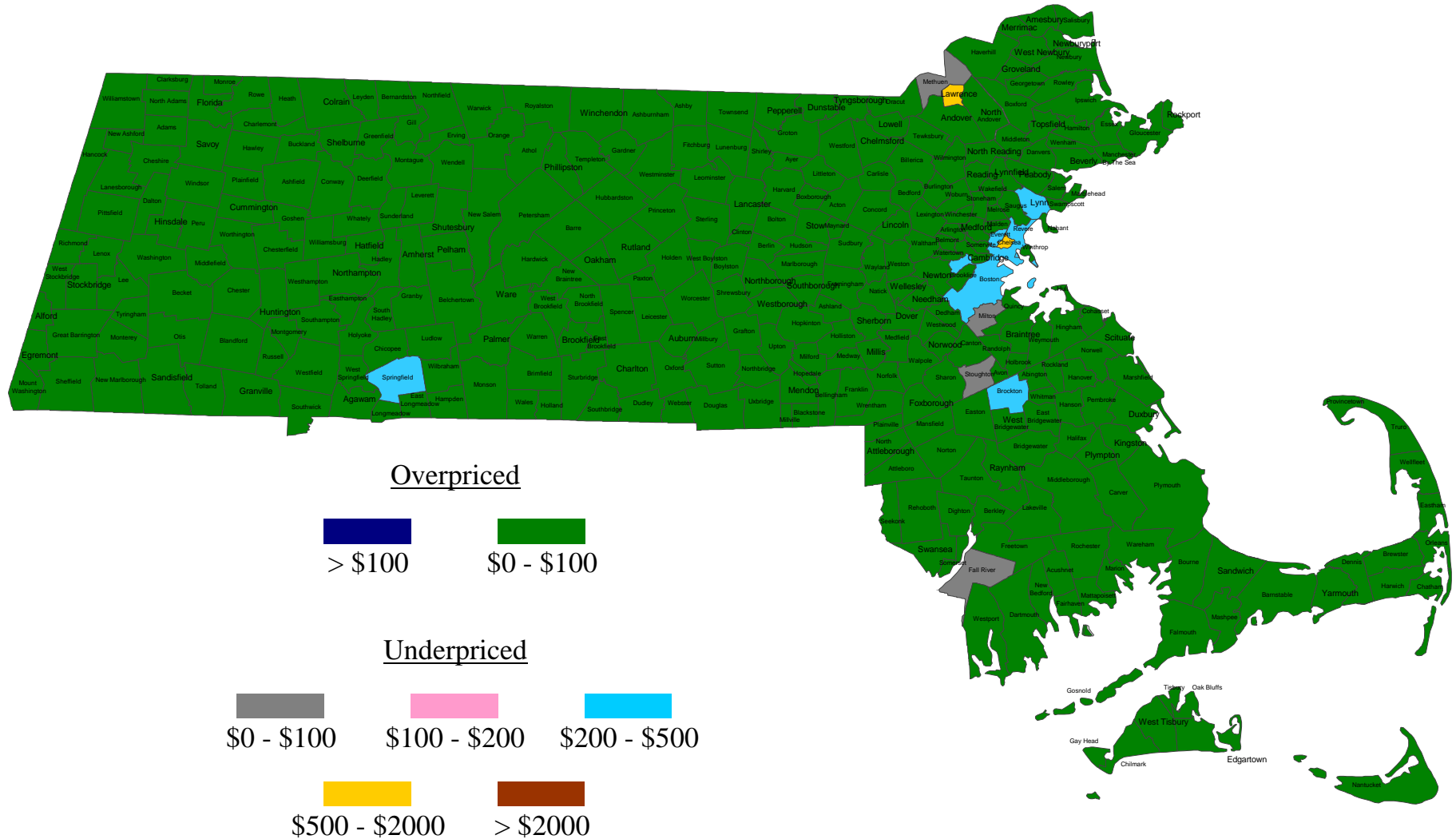
Estimated Rate Adequacy by Class & Territory

Assuming S/W Rate Level is Adequate



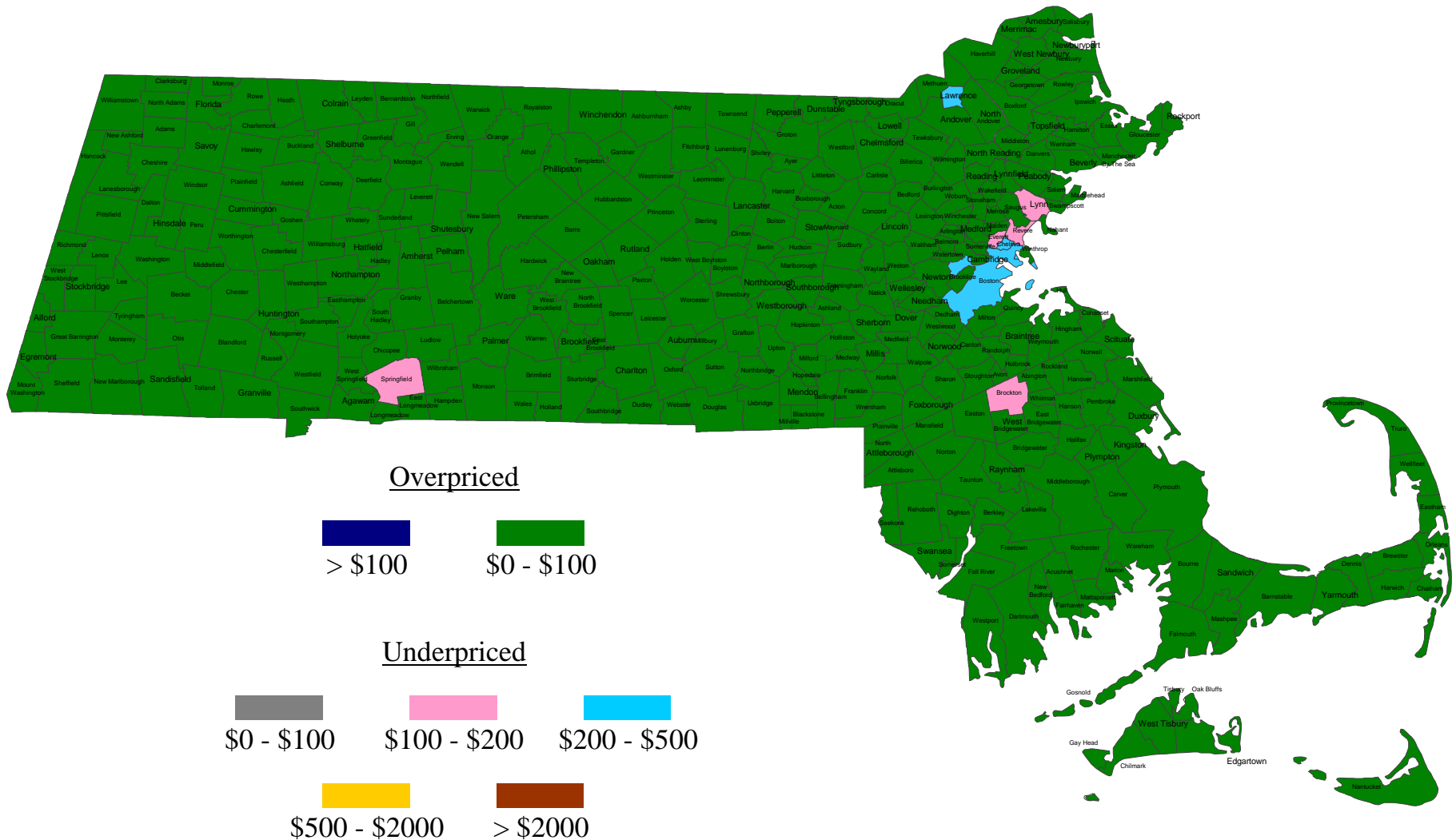
Based on 24 Subclasses

Averaged Across All Classes - Underpricing Geographically Restricted

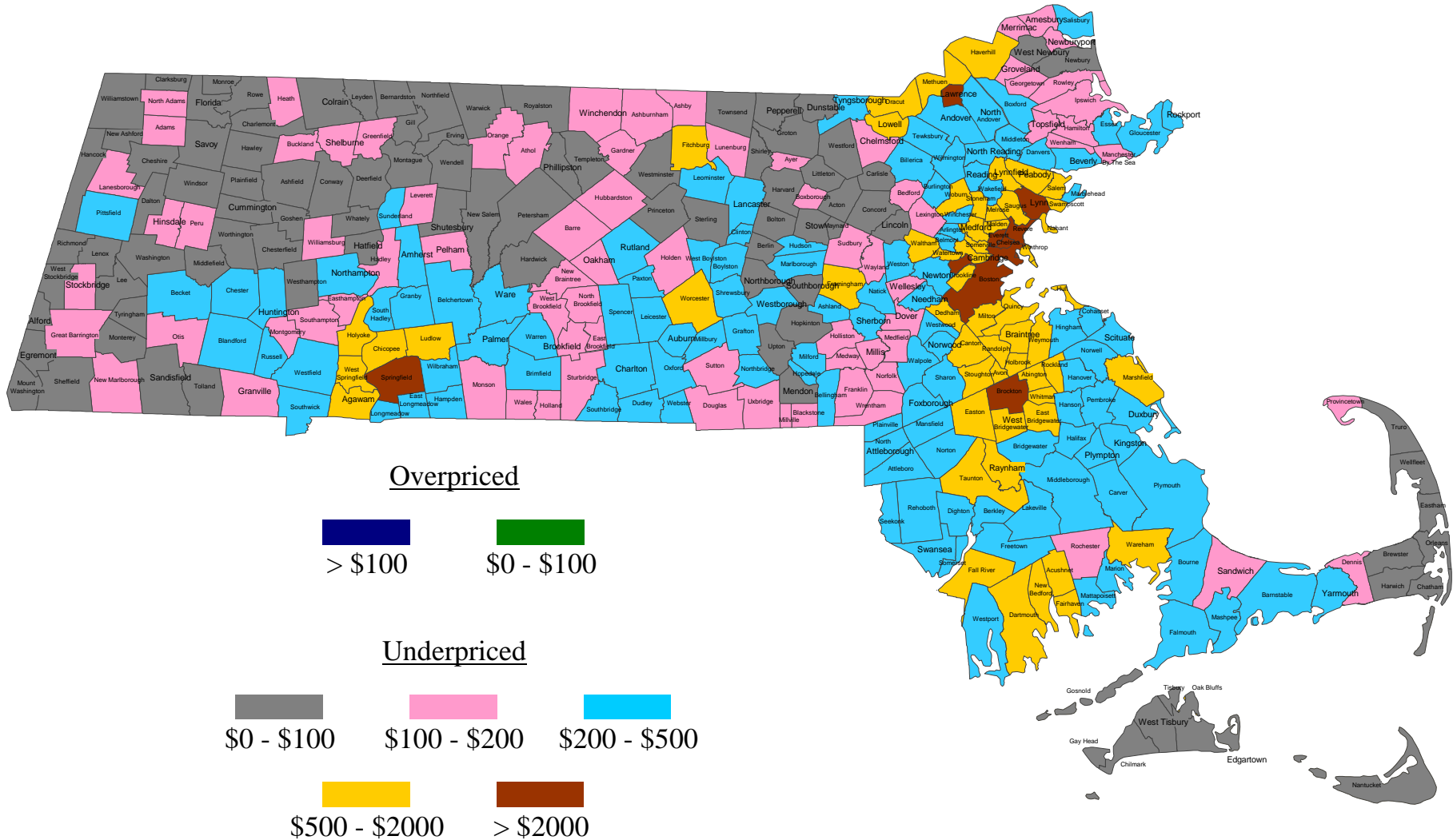




Class 15 (Senior Citizen) - Very Little Underpricing



Class 20 Youthful Driver - All Areas Underpriced; Densely Populated Areas by Over \$2000 (Some Over \$3000)



Percentage of Market at Various Subsidy Levels:

MASS AUTO - 2003 PRIVATE PASSENGER

Estimated Rate Adequacy by Class & Territory

Assuming S/W Rate Level is Too Low by 5%

Underpriced

■ >30%

■ 10%-30%

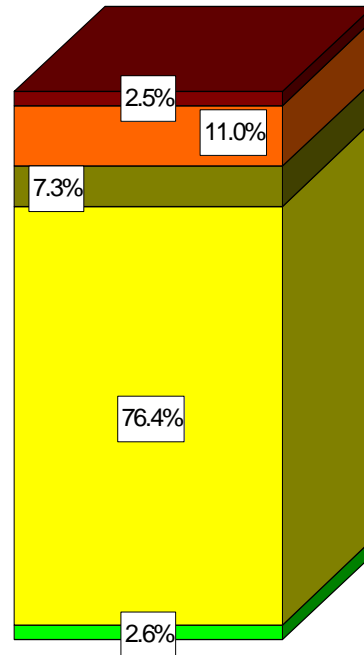
■ 0%-10%

Overpriced

■ 0%-10%

■ 10%-30%

■ >30%



Percent

Underpriced

■ > \$500

■ \$200 - \$500

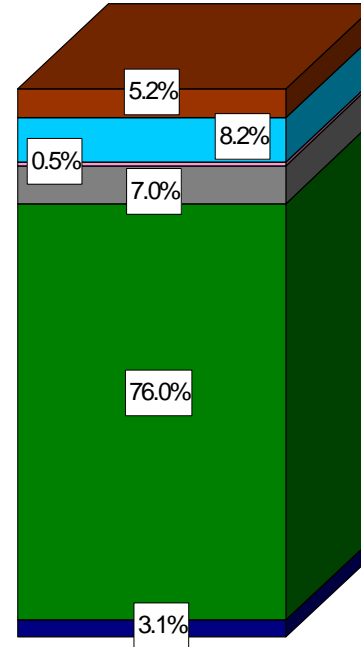
■ \$100 - \$200

■ \$0 - \$100

Overpriced

■ \$0 - \$100

■ > \$100



Dollars

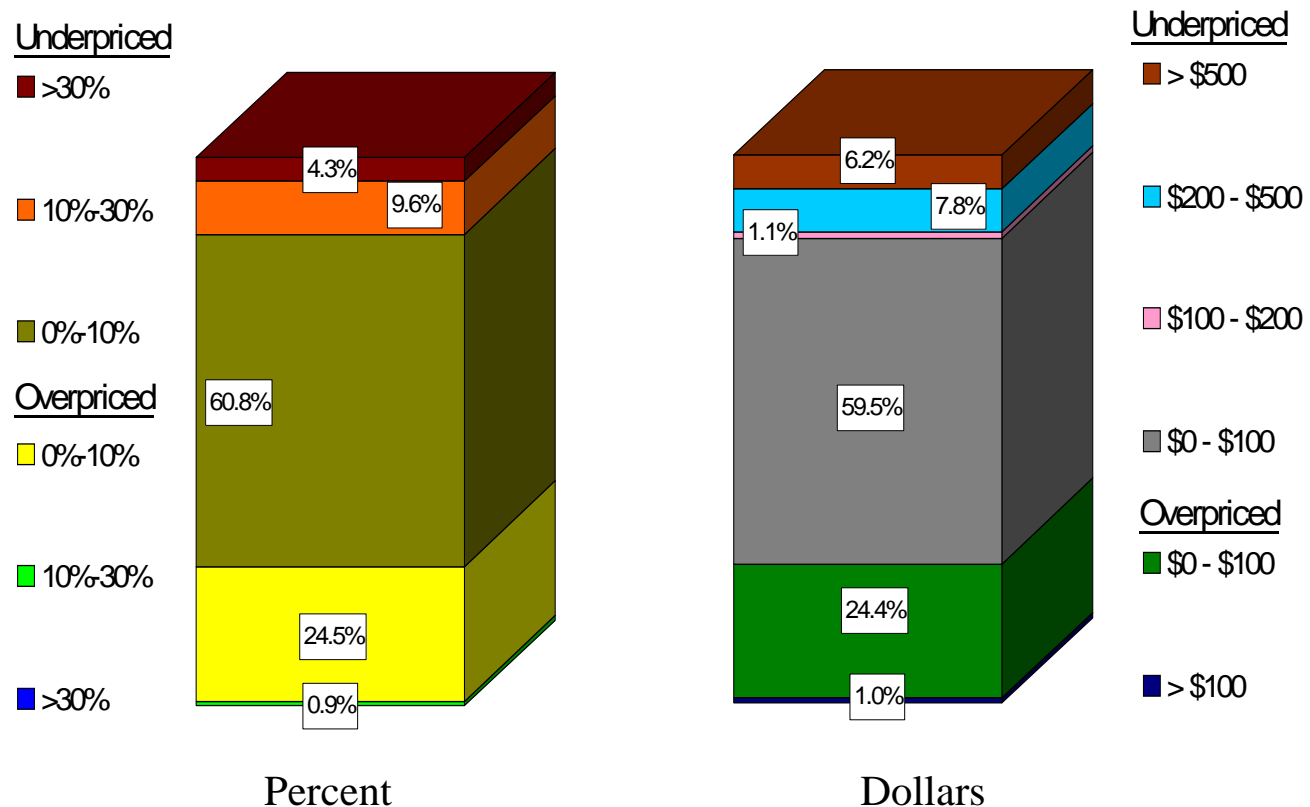
Based on 24 Subclasses

Percentage of Market at Various Subsidy Levels:

MASS AUTO - 2003 PRIVATE PASSENGER

Estimated Rate Adequacy by Class & Territory

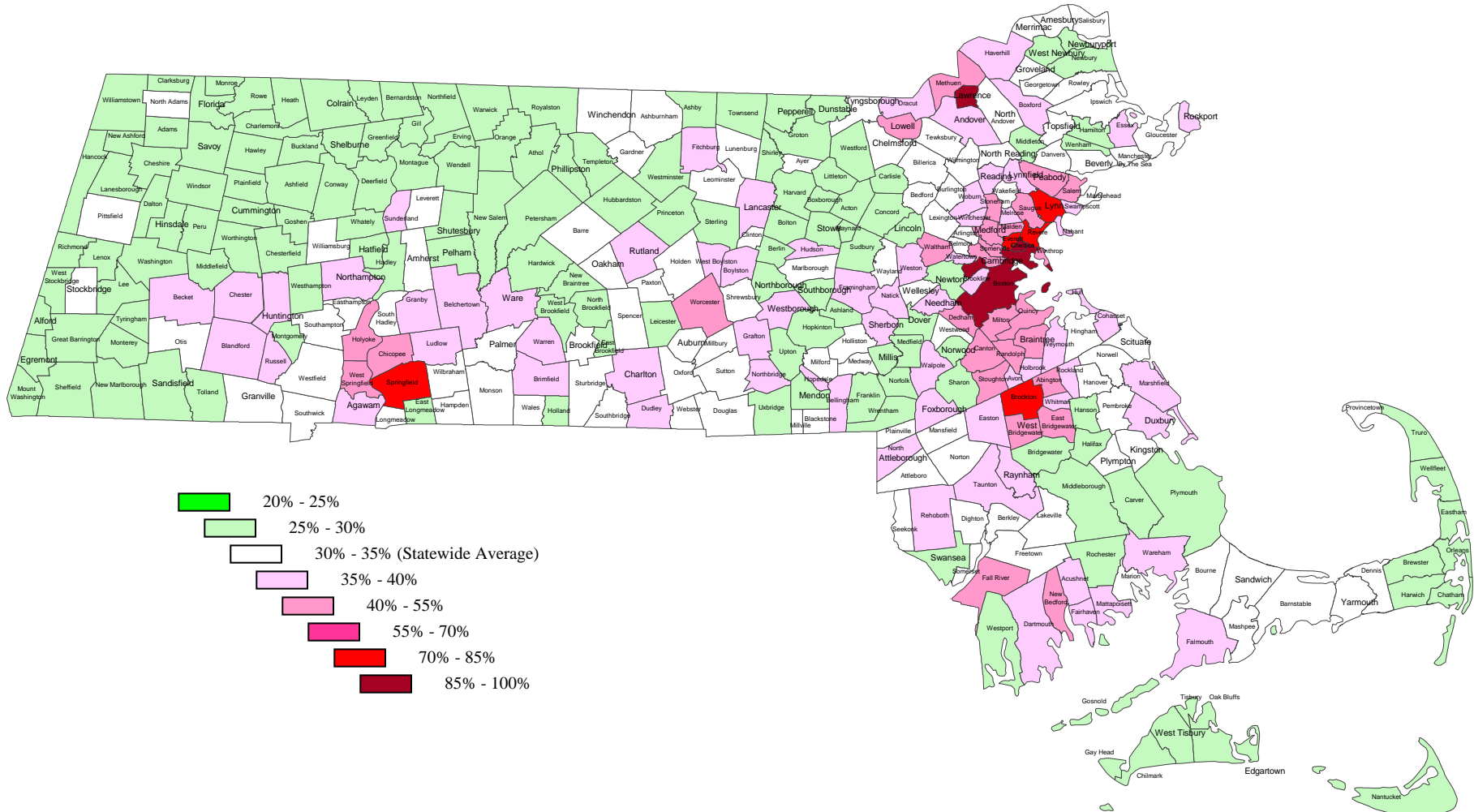
Assuming S/W Rate Level is Too Low by 10%



Based on 24 Subclasses



BI Claims as a Percent of PDL Claims Class 20 (0-3 Years' Experience, No DT)



Mass Auto - 2003 Private Passenger

Dollar Subsidies by Subclass and Territory
(Assuming S/W Rate Level is Adequate)

Terr.	30	15	21 AD	25 AD	10 AD	26 AD	18 AD	20 AD	17 AD	26 YF	18 YF	17 YF	21 YF	25 YF	20 YF	10 YF	18 MO	26 MO	21 MO	10 MO	17 MP	25 MP	20 MP	10 MP	Territory Total
27	\$139.73	\$52.47	\$262.72	\$496.03	\$87.06	\$30.40	(\$160.72)	\$244.12	(\$285.89)	\$220.81	\$163.46	\$332.98	\$135.71	\$248.27	\$322.25	(\$162.97)	\$57.79	(\$73.16)	(\$86.60)	(\$130.33)	(\$98.93)	(\$264.35)	(\$508.12)	(\$530.07)	\$69.14
1	122.36	52.47	271.69	491.12	85.76	24.68	(181.83)	229.32	(286.73)	231.57	165.65	336.05	133.64	235.68	309.86	(184.01)	52.38	(87.85)	(107.99)	(148.79)	(98.59)	(292.82)	(546.15)	(580.07)	66.69
2	125.24	55.20	282.41	482.18	91.32	17.80	(200.47)	188.55	(310.52)	236.82	169.88	345.38	136.20	203.49	276.46	(190.96)	49.15	(101.32)	(119.72)	(154.11)	(112.38)	(373.12)	(657.88)	(605.40)	69.50
3	121.67	59.35	289.58	466.09	98.74	12.37	(221.44)	157.85	(314.19)	242.87	172.58	348.60	135.64	177.20	249.00	(197.91)	44.14	(112.99)	(133.79)	(159.18)	(113.97)	(420.51)	(719.67)	(633.45)	74.63
4	106.17	42.81	303.88	432.41	75.00	4.14	(219.81)	108.90	(357.64)	254.46	174.85	367.37	136.62	132.72	203.46	(235.33)	46.20	(132.01)	(156.15)	(194.81)	(138.62)	(487.34)	(801.53)	(690.94)	52.00
5	106.19	39.38	318.23	385.20	71.06	(2.79)	(237.56)	32.41	(371.18)	267.54	177.26	379.91	137.54	66.59	132.95	(250.73)	42.04	(149.81)	(178.73)	(208.72)	(144.28)	(592.60)	(935.58)	(723.17)	46.62
6	111.29	41.51	324.73	342.16	75.26	(11.56)	(261.12)	(30.68)	(393.83)	271.13	178.06	388.66	135.77	10.66	73.92	(272.13)	34.90	(165.31)	(194.96)	(226.78)	(157.45)	(675.20)	(1,037.81)	(782.18)	48.04
7	110.26	55.38	333.57	281.99	93.43	(19.90)	(293.29)	(116.66)	(411.25)	278.49	183.59	396.00	134.04	(64.53)	(7.29)	(259.41)	28.14	(182.20)	(215.21)	(213.35)	(167.39)	(781.45)	(1,169.62)	(777.45)	61.44
8	121.85	30.91	343.04	218.41	63.65	(18.31)	(293.11)	(199.95)	(444.78)	287.62	187.88	418.63	138.54	(136.80)	(87.87)	(321.90)	31.09	(184.70)	(219.40)	(271.57)	(183.95)	(871.70)	(1,279.09)	(887.96)	33.56
9	180.61	42.54	341.44	79.24	79.57	(28.26)	(319.70)	(372.46)	(450.27)	283.38	185.22	416.40	133.05	(291.06)	(255.58)	(312.95)	20.63	(197.75)	(231.71)	(261.71)	(188.45)	(1,057.21)	(1,497.85)	(889.24)	44.88
10	101.81	36.74	355.67	(86.22)	75.65	(35.79)	(348.42)	(586.24)	(503.95)	294.33	193.42	446.89	134.77	(478.39)	(462.41)	(330.95)	16.80	(215.34)	(251.87)	(277.87)	(216.71)	(1,289.77)	(1,778.52)	(927.90)	32.40
11	91.96	1.74	363.04	(79.08)	30.81	(32.89)	(348.67)	(578.74)	(531.51)	303.78	195.08	464.56	138.05	(474.06)	(454.12)	(409.98)	17.83	(216.00)	(255.75)	(352.44)	(230.61)	(1,291.27)	(1,778.59)	(1,057.14)	(8.49)
12	115.17	36.98	334.29	(311.68)	77.52	(101.03)	(393.34)	(874.28)	(617.02)	271.87	200.15	407.95	84.87	(735.37)	(740.56)	(377.73)	6.69	(303.85)	(351.68)	(318.30)	(307.39)	(1,611.96)	(2,161.81)	(1,046.12)	24.41
13	171.37	34.10	333.63	(405.92)	78.41	(99.55)	(434.51)	(987.20)	(892.75)	273.79	203.19	229.47	83.98	(837.07)	(851.12)	(421.52)	(4.68)	(302.60)	(352.98)	(356.25)	(553.74)	(1,729.11)	(2,297.31)	(1,155.50)	17.28
14	200.81	44.23	301.86	(603.64)	92.83	(151.21)	(473.97)	(1,245.45)	(1,101.74)	243.68	209.61	104.02	37.84	(1,064.97)	(1,099.86)	(441.83)	(13.22)	(365.99)	(424.29)	(372.03)	(737.49)	(2,019.44)	(2,647.21)	(1,226.80)	6.22
15	166.48	(160.98)	173.96	(979.15)	(169.77)	(325.65)	(511.01)	(1,728.64)	(1,686.40)	121.34	232.23	(265.92)	(124.71)	(1,495.24)	(1,565.83)	(865.93)	(10.05)	(568.77)	(647.47)	(775.05)	(1,257.29)	(2,563.02)	(3,296.14)	(1,888.02)	(270.90)
16	181.99	(384.72)	(458.31)	(1,307.11)	(451.08)	(909.27)	(1,167.07)	(2,274.01)	(2,389.73)	(367.29)	(165.98)	(666.88)	(819.31)	(1,890.43)	(2,090.43)	(1,379.76)	(492.30)	(1,204.05)	(1,451.19)	(1,258.53)	(1,869.27)	(3,097.29)	(4,041.50)	(2,743.24)	(622.71)
17	122.16	0.79	340.57	11.05	28.29	(15.90)	(325.64)	(461.84)	(615.18)	285.74	193.26	372.83	138.99	(370.15)	(341.52)	(410.04)	24.11	(179.96)	(213.85)	(352.82)	(316.71)	(1,158.83)	(1,620.22)	(1,053.59)	(0.68)
18	256.73	(429.48)	437.41	(321.50)	(520.36)	(9.67)	(411.55)	(900.22)	(1,101.74)	365.73	243.80	129.41	187.33	(756.52)	(763.23)	(1,316.27)	30.18	(213.85)	(250.39)	(1,212.37)	(729.82)	(1,656.55)	(2,219.10)	(2,484.80)	(538.66)
19	210.97	(281.74)	373.97	(528.16)	(327.12)	(89.27)	(497.35)	(1,159.21)	(1,430.93)	308.21	228.07	(98.95)	109.34	(987.39)	(1,014.65)	(1,085.86)	(8.40)	(305.46)	(353.87)	(986.81)	(1,028.55)	(1,937.51)	(2,550.99)	(2,199.83)	(377.70)
20	150.01	(505.04)	404.86	(485.01)	(616.35)	(56.05)	(447.29)	(1,109.10)	(1,244.03)	335.69	253.70	69.43	143.84	(941.85)	(965.22)	(1,475.13)	25.20	(269.11)	(313.03)	(1,363.02)	(847.25)	(1,887.03)	(2,494.38)	(2,735.97)	(637.13)
21	391.44	(568.26)	(287.94)	(1,350.96)	(681.66)	(652.64)	(1,049.41)	(2,463.66)	(2,685.63)	(109.88)	(18.16)	(811.01)	(649.28)	(1,953.34)	(2,274.10)	(1,808.21)	(354.31)	(947.84)	(1,281.75)	(1,661.14)	(2,119.32)	(3,199.65)	(4,288.72)	(3,462.20)	(848.79)
22	219.11	(750.14)	(448.38)	(1,618.32)	(917.75)	(884.84)	(1,149.45)	(2,732.85)	(2,858.20)	(308.83)	(63.97)	(928.27)	(831.34)	(2,246.44)	(2,535.38)	(2,147.42)	(417.80)	(1,198.12)	(1,501.65)	(1,986.89)	(2,275.19)	(3,546.01)	(4,634.05)	(3,952.79)	(1,123.42)
23	216.10	53.59	317.25	(656.24)	106.08	(141.73)	(579.64)	(1,309.75)	(1,503.16)	256.07	155.44	(188.65)	51.94	(1,121.24)	(1,163.21)	(436.40)	(84.17)	(358.09)	(412.44)	(365.58)	(1,106.06)	(2,083.32)	(2,720.62)	(1,232.86)	28.86
24	136.53	3.75	366.57	(303.14)	37.60	(40.64)	(436.61)	(851.65)	(1,053.05)	305.34	202.22	84.31	135.74	(718.05)	(720.85)	(500.04)	(6.02)	(228.82)	(268.30)	(429.85)	(709.46)	(1,576.49)	(2,110.98)	(1,289.38)	(21.17)
25	164.45	(18.12)	339.91	(666.64)	17.09	(134.14)	(576.73)	(1,335.13)	(1,508.54)	276.18	145.96	(153.34)	66.51	(1,143.39)	(1,184.98)	(615.98)	(89.62)	(357.32)	(412.02)	(533.33)	(1,099.14)	(2,129.75)	(2,780.71)	(1,545.43)	(62.39)
26	244.20	(150.52)	170.15	(951.33)	(149.73)	(345.88)	(612.40)	(1,702.82)	(1,954.13)	124.83	215.05	(421.43)	(143.57)	(1,469.78)	(1,539.57)	(934.81)	(54.68)	(601.89)	(692.68)	(832.32)	(1,491.12)	(2,542.44)	(3,274.61)	(2,087.45)	(262.70)
Class Total	\$128.76	\$22.32	\$265.24	\$141.65	\$47.09	(\$22.25)	(\$287.17)	(\$944.50)	(\$634.08)	\$250.40	\$177.32	\$264.00	\$53.35	(\$204.51)	(\$810.05)	(\$339.85)	\$25.91	(\$170.54)	(\$317.53)	(\$289.33)	(\$362.78)	(\$920.71)	(\$2,238.99)	(\$907.95)	\$9.90
Expo Dist of Class	1.5%	14.8%	0.1%	0.0%	73.3%	0.0%	0.1%	0.1%	0.3%	1.0%	0.7%	1.2%	0.1%	0.5%	0.2%	1.6%	0.6%	0.9%	0.1%	0.2%	1.0%	0.5%	0.1%	1.2%	100.0%

Mass Auto - 2003 Private Passenger

Cost Based Rates for the Standard Package by Subclass and Territory (Assuming S/W Rate Level is Adequate)

Terr.	30	15	21 AD	25 AD	10 AD	26 AD	18 AD	20 AD	17 AD	26 YF	18 YF	17 YF	21 YF	25 YF	20 YF	10 YF	18 MO	26 MO	21 MO	10 MO	17 MP	25 MP	20 MP	10 MP	Territory Total
27	\$660.96	\$494.71	\$1,208.32	\$1,851.64	\$642.95	\$1,303.99	\$1,155.83	\$2,352.16	\$1,849.00	\$1,113.58	\$831.65	\$1,230.13	\$1,335.33	\$2,099.40	\$2,274.03	\$892.98	\$937.32	\$1,407.55	\$1,557.64	\$860.34	\$1,662.04	\$2,612.02	\$3,104.40	\$1,260.08	\$689.03
1	743.98	533.62	1,313.35	1,909.02	693.69	1,416.92	1,238.87	2,424.77	1,860.68	1,210.03	891.39	1,237.90	1,451.40	2,164.46	2,344.23	963.46	1,004.66	1,529.45	1,693.03	928.24	1,672.54	2,692.96	3,200.24	1,359.52	750.13
2	791.98	559.65	1,391.04	2,082.78	725.86	1,499.93	1,320.43	2,646.67	1,959.63	1,280.91	950.08	1,303.73	1,537.25	2,361.47	2,558.76	1,008.14	1,070.81	1,619.05	1,793.17	971.29	1,761.49	2,938.08	3,493.10	1,422.58	780.64
3	826.71	588.01	1,464.49	2,159.00	762.82	1,578.54	1,404.82	2,743.90	1,980.22	1,348.04	1,010.80	1,317.43	1,618.43	2,447.89	2,652.75	1,059.47	1,139.24	1,703.90	1,887.86	1,020.74	1,780.00	3,045.60	3,621.42	1,495.01	818.17
4	880.03	613.62	1,591.34	2,239.72	797.98	1,714.30	1,407.11	2,846.77	2,166.11	1,463.98	1,012.45	1,441.10	1,758.60	2,539.41	2,752.21	1,108.31	1,141.10	1,850.45	2,051.37	1,067.79	1,947.09	3,159.47	3,757.20	1,563.92	851.34
5	937.85	636.28	1,719.04	2,381.07	827.45	1,851.30	1,478.96	3,026.78	2,244.04	1,580.97	1,064.14	1,492.95	1,899.73	2,699.68	2,926.24	1,149.24	1,199.36	1,998.32	2,216.00	1,107.23	2,017.14	3,358.87	3,994.77	1,621.68	894.33
6	966.74	687.77	1,797.66	2,477.40	893.31	1,935.98	1,565.83	3,149.15	2,337.85	1,653.29	1,126.65	1,555.36	1,986.62	2,808.90	3,044.55	1,240.70	1,269.81	2,089.73	2,317.35	1,195.35	2,101.47	3,494.76	4,156.28	1,750.75	960.93
7	1,003.78	698.04	1,898.31	2,589.61	907.32	2,043.51	1,700.24	3,292.46	2,411.85	1,745.12	1,223.36	1,604.60	2,097.84	2,936.13	3,183.09	1,260.16	1,378.81	2,205.81	2,447.09	1,214.10	2,167.99	3,653.05	4,345.42	1,778.20	982.55
8	1,090.55	763.60	1,945.57	2,654.58	991.41	2,095.14	1,714.90	3,374.34	2,579.64	1,789.21	1,233.91	1,716.23	2,150.07	3,009.79	3,262.26	1,376.96	1,390.70	2,261.53	2,508.01	1,326.63	2,318.81	3,744.69	4,453.48	1,943.02	1,055.25
9	1,014.12	777.26	1,982.62	2,767.43	1,009.35	2,134.22	1,800.24	3,518.93	2,589.36	1,822.58	1,295.32	1,722.69	2,191.01	3,137.73	3,402.05	1,401.87	1,459.91	2,303.71	2,555.77	1,350.63	2,327.54	3,903.88	4,644.32	1,978.16	1,079.71
10	1,149.07	805.61	2,101.58	2,930.83	1,045.53	2,260.85	1,931.86	3,728.08	2,840.83	1,930.73	1,390.02	1,889.99	2,322.48	3,323.00	3,604.25	1,452.13	1,566.64	2,440.40	2,709.12	1,399.05	2,553.59	4,134.38	4,920.36	2,049.08	1,125.51
11	1,282.45	875.00	2,140.48	2,951.86	1,133.45	2,305.68	1,938.66	3,751.78	2,975.98	1,969.01	1,394.91	1,979.91	2,365.47	3,346.84	3,627.16	1,574.24	1,572.16	2,488.79	2,759.27	1,516.70	2,675.08	4,164.05	4,951.63	2,221.40	1,231.23
12	1,280.87	902.04	2,372.88	3,166.35	1,170.64	2,553.80	2,116.00	4,025.91	3,062.31	2,180.90	1,522.51	2,037.34	2,622.30	3,590.04	3,892.19	1,625.89	1,715.97	2,756.62	3,058.85	1,566.46	2,752.68	4,466.63	5,313.44	2,294.28	1,261.12
13	1,326.35	992.57	2,375.08	3,222.15	1,285.52	2,556.79	2,273.63	4,096.55	3,352.87	2,183.45	1,635.93	2,230.65	2,624.73	3,653.30	3,960.47	1,785.45	1,843.80	2,759.84	3,061.69	1,720.18	3,013.86	4,545.34	5,406.66	2,519.43	1,375.87
14	1,409.90	1,060.57	2,511.83	3,447.67	1,374.83	2,704.39	2,437.22	4,383.12	3,602.47	2,309.50	1,753.64	2,396.71	2,775.85	3,909.00	4,237.53	1,909.49	1,976.47	2,919.17	3,237.98	1,839.69	3,238.22	4,863.47	5,784.88	2,694.46	1,510.01
15	1,569.46	1,381.33	2,841.45	3,856.96	1,790.14	3,061.18	2,649.90	4,901.37	4,243.98	2,614.19	1,906.66	2,823.50	3,140.12	4,373.05	4,738.56	2,486.30	2,148.94	3,304.30	3,662.88	2,395.42	3,814.87	5,440.83	6,468.87	3,508.39	1,920.94
16	1,923.65	1,843.89	3,434.54	4,359.35	2,388.05	3,711.76	3,569.27	5,526.69	5,147.37	3,169.78	2,568.18	3,424.52	3,795.54	4,942.67	5,343.11	3,316.73	2,894.50	4,006.54	4,427.42	3,195.50	4,626.91	6,149.53	7,294.18	4,680.21	2,613.93
17	1,149.74	868.70	1,917.80	2,848.83	1,127.13	2,065.76	1,850.06	3,622.09	2,951.89	1,764.12	1,331.16	1,963.88	2,119.38	3,230.03	3,501.77	1,565.46	1,500.31	2,229.82	2,472.22	1,508.24	2,653.42	4,018.71	4,780.47	2,209.01	1,156.36
18	1,421.90	1,579.61	2,379.20	3,251.03	2,046.61	2,570.94	2,336.55	4,123.98	3,678.34	2,195.54	1,681.20	2,447.19	2,629.28	3,686.05	3,986.99	2,842.52	1,894.82	2,775.12	3,067.00	2,738.62	3,306.42	4,586.08	5,442.86	4,011.05	2,101.41
19	1,507.00	1,505.64	2,517.71	3,431.95	1,951.04	2,722.13	2,586.39	4,351.93	3,979.59	2,324.65	1,860.97	2,647.61	2,782.34	3,891.18	4,207.37	2,709.78	2,097.44	2,938.32	3,245.55	2,610.73	3,577.21	4,841.30	5,743.71	3,823.75	2,031.29
20	1,519.83	1,704.10	2,483.30	3,414.10	2,208.28	2,682.83	2,499.29	4,331.59	3,924.25	2,291.09	1,798.30	2,610.79	2,744.32	3,870.94	4,187.71	3,067.06	2,026.80	2,895.89	3,201.19	2,954.95	3,527.47	4,816.12	5,716.87	4,327.90	2,260.74
21	2,077.08	2,237.29	3,437.71	4,501.79	2,896.86	3,717.06	3,676.78	5,706.73	5,600.82	3,174.30	2,645.53	3,726.20	3,799.05	5,104.17	5,517.17	4,023.41	2,981.68	4,012.26	4,431.52	3,876.34	5,034.51	6,350.48	7,531.79	5,677.40	3,098.30
22	2,240.07	2,440.89	3,643.42	4,694.19	3,162.00	3,944.74	3,870.15	5,944.81	5,766.07	3,368.73	2,784.67	3,836.14	4,026.38	5,322.31	5,747.34	4,391.67	3,138.50	4,258.02	4,696.69	4,231.14	5,183.06	6,621.88	7,846.01	6,197.04	3,414.80
23	1,407.72	1,076.68	2,524.11	3,475.15	1,394.96	2,724.30	2,620.82	4,411.61	3,927.40	2,326.50	1,885.74	2,612.89	2,789.42	3,940.15	4,265.07	1,937.44	2,125.35	2,940.66	3,253.80	1,866.62	3,530.30	4,902.23	5,822.48	2,733.90	1,505.76
24	1,381.33	1,065.78	2,196.13	3,100.78	1,382.50	2,369.47	2,277.68	3,937.75	3,398.11	2,023.49	1,638.85	2,260.75	2,426.96	3,515.69	3,806.95	1,920.14	1,847.09	2,557.65	2,831.00	1,849.95	3,054.52	4,374.13	5,197.08	2,709.48	1,478.79
25	1,608.65	1,257.14	2,601.06	3,562.86	1,627.88	2,810.13	2,576.65	4,520.14	4,048.94	2,399.81	1,853.96	2,693.74	2,874.46	4,036.61	4,369.99	2,260.95	2,089.54	3,033.31	3,352.99	2,178.30	3,639.54	5,025.97	5,965.72	3,190.40	1,725.09
26	1,720.38	1,558.29	2,984.63	3,874.59	2,018.78	3,223.61	2,950.14	4,914.77	4,579.28	2,752.90	2,122.69	3,046.58	3,298.35	4,393.04	4,751.52	2,803.86	2,392.42	3,479.62	3,847.46	2,701.37	4,116.27	5,465.70	6,486.56	3,956.50	2,151.21
Class Total	\$955.81	\$747.32	\$2,015.88	\$2,586.98	\$994.99	\$1,867.23	\$1,656.06	\$4,047.70	\$2,683.20	\$1,594.58	\$1,191.57	\$1,785.13	\$2,227.78	\$2,933.14	\$3,913.25	\$1,381.93	\$1,342.98	\$2,015.52	\$2,598.65	\$1,331.42	\$2,411.90	\$3,649.33	\$5,342.19	\$1,950.03	\$1,064.99

Decision Based Territorial Relativities Within Class

Terr.	30	15	21 AD	25 AD	10 AD	26 AD	18 AD	20 AD	17 AD	26 YF	18 YF	17 YF	21 YF	25 YF	20 YF	10 YF	18 MO	26 MO	21 MO	10 MO	17 MP	25 MP	20 MP	10 MP	Territory Total
27	0.692	0.662	0.599	0.716	0.646	0.698	0.698	0.581	0.689	0.698	0.698	0.689	0.599	0.716	0.581	0.646	0.698	0.698	0.599	0.646	0.689	0.716	0.581	0.646	0.647
1	0.778	0.714	0.652	0.738	0.697	0.759	0.748	0.599	0.693	0.759	0.748	0.693	0.652	0.738	0.599	0.697	0.748	0.759	0.652	0.697	0.693	0.738	0.599	0.697	0.704
2	0.829	0.749	0.690	0.805	0.730	0.803	0.797	0.654	0.730	0.803	0.797	0.730	0.690	0.805	0.654	0.730	0.797	0.803	0.690	0.730	0.730	0.805	0.654	0.730	0.733
3	0.865	0.787	0.726	0.835	0.767	0.845	0.848	0.678	0.738	0.845	0.848	0.738	0.726	0.835	0.678	0.767	0.848	0.845	0.726	0.767	0.738	0.835	0.678	0.767	0.768
4	0.921	0.821	0.789	0.866	0.802	0.918	0.850	0.703	0.807	0.918	0.850	0.807	0.789	0.866	0.703	0.802	0.850	0.918	0.789	0.802	0.807	0.866	0.703	0.802	0.799
5	0.981	0.851	0.853	0.920	0.832	0.991	0.893	0.748	0.836	0.991	0.893	0.836	0.853	0.920	0.748	0.832	0.893	0.991	0.853	0.832	0.836	0.920	0.748	0.832	0.840
6	1.011	0.920	0.892	0.958	0.898	1.037	0.946	0.778	0.871	1.037	0.946	0.871	0.892	0.958	0.778	0.898	0.946	1.037	0.892	0.898	0.871	0.958	0.778	0.898	0.902
7	1.050	0.934	0.942	1.001	0.912	1.094	1.027	0.813	0.899	1.094	1.027	0.899	0.942	1.001	0.813	0.912	1.027	1.094	0.942	0.912	0.899	1.001	0.813	0.912	0.923
8	1.141	1.022	0.965	1.026	0.996	1.122	1.036	0.834	0.961	1.122	1.036	0.961	0.965	1.026	0.834	0.996	1.036	1.122	0.965	0.996	0.961	1.026	0.834	0.996	0.993
9	1.061	1.040	0.983	1.070	1.014	1.143	1.087	0.869	0.965	1.143	1.087	0.965	0.983	1.070	0.869	1.014	1.087	1.143	0.983	1.014	0.985	1.070	0.869	1.014	1.014
10	1.202	1.078	1.043	1.133	1.051	1.211	1.167	0.921	1.059	1.211	1.167	1.059	1.043	1.133	0.921	1.051	1.167	1.211	1.043	1.051	1.059	1.133	0.921	1.051	1.057
11	1.342	1.171	1.062	1.141	1.139	1.235	1.171	0.927	1.109	1.235	1.171	1.109	1.062	1.141	0.927	1.139	1.171	1.235	1.062	1.139	1.109	1.141	0.927	1.139	1.156
12	1.340	1.207	1.177	1.224	1.177	1.368	1.278	0.995	1.141	1.368	1.278	1.141	1.177	1.224	0.995	1.177	1.278	1.368	1.177	1.177	1.141	1.224	0.995	1.177	1.184
13	1.388	1.328	1.178	1.246	1.292	1.369	1.373	1.012	1.250	1.369	1.373	1.250	1.178	1.246	1.012	1.292	1.373	1.369	1.178	1.292	1.250	1.246	1.012	1.292	1.292
14	1.475	1.419	1.246	1.333	1.382	1.448	1.472	1.083	1.343	1.448	1.472	1.343	1.246	1.333	1.083	1.382	1.472	1.448	1.246	1.382	1.343	1.333	1.083	1.382	1.418
15	1.642	1.848	1.410	1.491	1.799	1.639	1.600	1.211	1.582	1.639	1.600	1.582	1.410	1.491	1.211	1.799	1.600	1.639	1.410	1.799	1.582	1.491	1.211	1.799	1.804
16	2.013	2.467	1.704	1.685	2.400	1.988	2.155	1.365	1.918	1.988	2.155	1.918	1.704	1.685	1.365	2.400	2.155	1.988	1.704	2.400	1.918	1.685	1.365	2.400	2.454
17	1.203	1.162	0.951	1.101	1.133	1.106	1.117	0.895	1.100	1.106	1.117	1.100	0.951	1.101	0.895	1.133	1.117	1.106	0.951	1.133	1.100	1.101	0.895	1.133	1.086
18	1.488	2.114	1.180	1.257	2.057	1.377	1.411	1.019	1.371	1.377	1.411	1.371	1.180	1.257	1.019	2.057	1.411	1.377	1.180	2.057	1.371	1.257	1.019	2.057	1.973
19	1.577	2.015	1.249	1.327	1.961	1.458	1.562	1.075	1.483	1.458	1.562	1.483	1.249	1.327	1.075	1.961	1.562	1.458	1.249	1.961	1.483	1.327	1.075	1.961	1.907
20	1.590	2.280	1.232	1.320	2.219	1.437	1.509	1.070	1.463	1.437	1.509	1.463	1.232	1.320	1.070	2.219	1.509	1.437	1.232	2.219	1.463	1.320	1.070	2.219	2.123
21	2.173	2.994	1.705	1.740	2.911	1.991	2.220	1.410	2.087	1.991	2.220	2.087	1.705	1.740	1.410	2.911	2.220	1.991	1.705	2.911	2.087	1.740	1.410	2.911	2.909
22	2.344	3.266	1.807	1.815	3.178	2.113	2.337	1.469	2.149	2.113	2.337	2.149	1.807	1.815	1.469	3.178	2.337	2.113	1.807	3.178	2.149	1.815	1.469	3.178	3.206
23	1.473	1.441	1.252	1.343	1.402	1.459	1.583	1.090	1.464	1.459	1.583	1.464	1.252	1.343	1.090	1.402	1.583	1.459	1.252	1.402	1.464	1.343	1.090	1.402	1.414
24	1.445	1.426	1.089	1.199	1.389	1.269	1.375	0.973	1.266	1.269	1.375	1.266	1.089	1.199	0.973	1.389	1.375	1.269	1.089	1.389	1.266	1.199	0.973	1.389	1.389
25	1.683	1.682	1.290	1.377	1.636	1.505	1.556	1.117	1.509	1.505	1.556	1.509	1.290	1.377	1.117	1.636	1.556	1.505	1.290	1.636	1.509	1.377	1.117	1.636	1.620
26	1.800	2.085	1.481	1.498	2.029	1.726	1.781	1.214	1.707	1.726	1.781	1.707	1.481	1.498	1.214	2.029	1.781	1.726	1.481	2.029	1.707	1.498	1.214	2.029	2.020
Class Total	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Expo Dist of Class	1.5%	14.8%	0.1%	0.0%	73.3%	0.0%	0.1%	0.1%	0.3%	1.0%	0.7%	1.2%	0.1%	0.5%	0.2%	1.6%	0.6%	0.9%	0.1%	0.2%	1.0%	0.5%	0.1%	1.2%	100.0%

Mass Auto - 2003 Private Passenger

Decision Based Rates for the Standard Package by Subclass and Territory

Terr.	30	15	21 AD	25 AD	10 AD	26 AD	18 AD	20 AD	17 AD	26 YF	18 YF	17 YF	21 YF	25 YF	20 YF	10 YF	18 MO	26 MO	21 MO	10 MO	17 MP	25 MP	20 MP	10 MP	Territory Total
27	\$800.69	\$547.18	\$1,471.04	\$2,347.67	\$730.01	\$1,334.39	\$995.11	\$2,596.28	\$1,563.11	\$1,334.39	\$995.11	\$1,563.11	\$1,471.04	\$2,347.67	\$2,596.28	\$730.01	\$995.11	\$1,334.39	\$1,471.04	\$730.01	\$1,563.11	\$2,347.67	\$2,596.28	\$730.01	\$758.17
1	866.34	586.09	1,585.04	2,400.14	779.45	1,441.60	1,057.04	2,654.09	1,573.95	1,441.60	1,057.04	1,573.95	1,485.04	2,400.14	2,654.09	779.45	1,057.04	1,441.60	1,585.04	779.45	1,573.95	2,400.14	2,654.09	779.45	816.81
2	917.22	614.85	1,673.45	2,564.96	817.18	1,517.73	1,119.96	2,835.22	1,649.11	1,517.73	1,119.96	1,649.11	1,673.45	2,564.96	2,835.22	817.18	1,119.96	1,517.73	1,673.45	817.18	1,649.11	2,564.96	2,835.22	817.18	850.14
3	948.38	647.36	1,754.07	2,625.09	861.56	1,590.91	1,183.38	2,901.75	1,666.03	1,590.91	1,183.38	1,666.03	1,754.07	2,625.09	2,901.75	861.56	1,183.38	1,590.91	1,754.07	861.56	1,666.03	2,625.09	2,901.75	861.56	892.81
4	986.20	656.43	1,895.22	2,672.13	872.98	1,718.44	1,187.30	2,955.67	1,808.47	1,718.44	1,187.30	1,808.47	1,895.22	2,672.13	2,955.67	872.98	1,187.30	1,718.44	1,895.22	872.98	1,808.47	2,672.13	2,955.67	872.98	903.34
5	1,044.04	729.28	2,037.27	2,766.27	898.51	1,848.51	1,241.40	3,059.19	1,872.86	1,848.51	1,241.40	1,872.86	2,037.27	2,766.27	3,059.19	898.51	1,241.40	1,848.51	2,037.27	898.51	1,872.86	2,766.27	3,059.19	898.51	940.95
6	1,078.03	729.28	2,122.39	2,819.56	968.57	1,924.42	1,304.71	3,118.47	1,944.02	1,924.42	1,304.71	1,944.02	2,122.39	2,819.56	3,118.47	968.57	1,304.71	1,924.42	2,122.39	968.57	1,944.02	2,819.56	3,118.47	968.57	1,008.97
7	1,114.04	753.42	2,231.88	2,871.60	1,000.75	2,023.61	1,406.95	3,175.80	2,000.60	2,023.61	1,406.95	2,000.60	2,231.88	2,871.60	3,175.80	1,000.75	1,406.95	2,023.61	2,231.88	1,000.75	2,000.60	2,871.60	3,175.80	1,000.75	1,043.99
8	1,212.40	794.51	2,288.61	2,872.99	1,055.06	2,076.83	1,421.79	3,174.39	2,134.86	2,076.83	1,421.79	2,134.86	2,288.61	2,872.99	3,174.39	1,055.06	1,421.79	2,076.83	2,288.61	1,055.06	2,134.86	2,872.99	3,174.39	1,055.06	1,088.81
9	1,194.73	819.80	2,324.06	2,846.67	1,088.92	2,105.96	1,480.54	3,146.47	2,139.09	2,105.96	1,480.54	2,139.09	2,324.06	2,846.67	3,146.47	1,088.92	1,480.54	2,105.96	2,324.06	1,088.92	2,139.09	2,846.67	3,146.47	1,088.92	1,124.59
10	1,250.88	842.35	2,457.25	2,844.61	1,121.18	2,225.06	1,583.44	3,141.84	2,336.88	2,225.06	1,583.44	2,336.88	2,457.25	2,844.61	3,141.84	1,121.18	1,583.44	2,225.06	2,457.25	1,121.18	2,336.88	2,844.61	3,141.84	1,121.18	1,157.91
11	1,374.41	876.74	2,503.52	2,872.78	1,164.26	2,272.79	1,589.99	3,173.04	2,444.47	2,272.79	1,589.99	2,444.47	2,503.52	2,872.78	3,173.04	1,164.26	1,589.99	2,272.79	2,503.52	1,164.26	2,444.47	2,872.78	3,173.04	1,164.26	1,222.74
12	1,396.04	939.02	2,707.17	2,854.67	1,248.16	2,452.77	1,722.66	3,151.63	2,445.29	2,452.77	1,722.66	2,445.29	2,707.17	2,854.67	3,151.63	1,248.16	1,722.66	2,452.77	2,707.17	1,248.16	2,445.29	2,854.67	3,151.63	1,248.16	1,285.52
13	1,497.72	1,026.67	2,708.71	2,816.23	1,363.93	2,457.24	1,839.12	3,109.35	2,460.12	2,457.24	1,839.12	2,460.12	2,708.71	2,816.23	3,109.35	1,363.93	1,839.12	2,457.24	2,708.71	1,363.93	2,460.12	2,816.23	3,109.35	1,363.93	1,393.15
14	1,610.71	1,104.80	2,813.69	2,844.03	1,467.66	2,553.18	1,963.25	3,137.67	2,500.73	2,553.18	1,963.25	2,500.73	2,813.69	2,844.03	3,137.67	1,467.66	1,963.25	2,553.18	2,813.69	1,467.66	2,500.73	2,844.03	3,137.67	1,467.66	1,516.22
15	1,735.94	1,220.35	3,015.41	2,877.81	1,620.37	2,735.53	2,138.89	3,172.73	2,557.58	2,735.53	2,138.89	2,557.58	3,015.41	2,877.81	3,172.73	1,620.37	2,138.89	2,735.53	3,015.41	1,620.37	2,557.58	2,877.81	3,172.73	1,620.37	1,650.04
16	2,105.64	1,459.17	2,976.23	3,052.24	1,936.97	2,802.49	2,402.20	3,252.68	2,757.64	2,802.49	2,402.20	2,757.64	2,976.23	3,052.24	3,252.68	1,936.97	2,402.20	2,802.49	2,976.23	1,936.97	2,757.64	3,052.24	3,252.68	1,936.97	1,991.22
17	1,271.90	869.49	2,258.37	2,859.88	1,155.42	2,049.86	1,524.42	3,160.25	2,336.71	2,049.86	1,524.42	2,336.71	2,258.37	2,859.88	3,160.25	1,155.42	1,524.42	2,049.86	2,258.37	1,155.42	2,336.71	2,859.88	3,160.25	1,155.42	1,155.68
18	1,678.63	1,150.13	2,816.61	2,929.53	1,526.25	2,561.27	1,925.00	3,223.76	2,576.60	2,561.27	1,925.00	2,576.60	2,816.61	2,929.53	3,223.76	1,526.25	1,925.00	2,561.27	2,816.61	1,526.25	2,576.60	2,929.53	3,223.76	1,526.25	1,562.75
19	1,717.97	1,223.90	2,891.68	2,903.79	1,623.92	2,632.86	2,089.04	3,192.72	2,548.66	2,632.86	2,089.04	2,548.66	2,891.68	2,903.79	3,192.72	1,623.92	2,089.04	2,632.86	2,891.68	1,623.92	2,548.66	2,903.79	3,192.72	1,623.92	1,653.59
20	1,669.84	1,199.06	2,888.16	2,929.09	1,591.93	2,626.78	2,052.00	3,222.49	2,680.22	2,626.78	2,052.00	2,680.22	2,888.16	2,929.09	3,222.49	1,591.93	2,052.00	2,626.78	2,888.16	1,591.93	2,680.22	2,929.09	3,222.49	1,591.93	1,623.61
21	2,468.52	1,669.03	3,149.77	3,150.83	2,215.20	3,064.42	2,627.37	3,243.07	2,915.19	3,064.42	2,627.37	2,915.19	3,149.77	3,150.83	3,243.07	2,215.20	2,627.37	3,064.42	3,149.77	2,215.20	2,915.19	3,150.83	3,243.07	2,215.20	2,249.51
22	2,459.18	1,690.75	3,195.04	3,075.87	2,244.25	3,059.90	2,720.70	3,211.96	2,907.87	3,059.90	2,720.70	2,907.87	3,195.04	3,075.87	3,211.96	2,244.25	2,720.70	3,059.90	3,195.04	2,244.25	2,907.87	3,075.87	3,211.96	2,244.25	2,291.38
23	1,623.82	1,130.27	2,841.36	2,818.91	1,501.04	2,582.57	2,041.18	3,101.86	2,424.24	2,582.57	2,041.18	2,424.24	2,841.36	2,818.91	3,101.86	1,501.04	2,041.18	2,582.57	2,841.36	1,501.04	2,424.24	2,818.91	3,101.86	1,501.04	1,534.62
24	1,517.86	1,069.53	2,562.70	2,797.64	1,420.10	2,328.83	1,841.07	3,086.10	2,345.06	2,328.83	1,841.07	2,345.06	2,562.70	2,797.64	3,086.10	1,420.10	1,841.07	2,328.83	2,562.70	1,420.10	2,345.06	2,797.64	3,086.10	1,420.10	1,457.62
25	1,773.10	1,239.02	2,940.97	2,896.22	1,644.97	2,675.99	1,999.92	3,185.01	2,540.40	2,675.99	1,999.92	2,540.40	2,940.97	2,896.22	3,185.01	1,644.97	1,999.92	2,675.99	2,940.97	1,644.97	2,540.40	2,896.22	3,185.01	1,644.97	1,662.70
26	1,964.58	1,407.77	3,154.78	2,923.26	1,869.05	2,877.73	2,337.74	3,211.95	2,625.15	2,877.73	2,337.74	2,625.15	3,154.78	2,923.26	3,211.95	1,869.05	2,337.74	2,877.73	3,154.78	1,869.05	2,625.15	2,923.26	3,211.95	1,869.05	1,888.50
Class Total	\$1,084.58	\$769.64	\$2,281.12	\$2,728.63	\$1,042.09	\$1,844.98	\$1,368.89	\$3,103.19	\$2,049.12	\$1,844.98	\$1,368.89	\$2,049.12	\$2,281.12	\$2,728.63	\$3,103.19	\$1,042.09	\$1,368.89	\$1,844.98	\$2,281.12	\$1,042.09	\$2,049.12	\$2,728.63	\$3,103.19	\$1,042.09	\$1,074.89

Decision Based Territorial Relativities Within Class

Terr.	30	15	21 AD	25 AD	10 AD	26 AD	18 AD	20 AD	17 AD	26 YF	18 YF	17 YF	21 YF	25 YF	20 YF	10 YF	18 MO	26 MO	21 MO	10 MO	17 MP	25 MP	20 MP	10 MP	Territory Total
27	0.738	0.711	0.645	0.860	0.701	0.723	0.727	0.837	0.763	0.723	0.727	0.763	0.645	0.860	0.837	0.701	0.727	0.723	0.645	0.701	0.763	0.860	0.837	0.701	0.705
1	0.799	0.762	0.695	0.880	0.748	0.781	0.772	0.855	0.768	0.781	0.772	0.768	0.695	0.880	0.855	0.748	0.772	0.781	0.695	0.748	0.768	0.880	0.855	0.748	0.760
2	0.846	0.799	0.734	0.940	0.784	0.823	0.818	0.914	0.805	0.823	0.818	0.805	0.734	0.940	0.914	0.784	0.818	0.823	0.734	0.784	0.805	0.940	0.914	0.784	0.791
3	0.874	0.841	0.769	0.962	0.827	0.862	0.864	0.935	0.813	0.862	0.864	0.813	0.769	0.962	0.935	0.827	0.864	0.862	0.769	0.827	0.813	0.962	0.935	0.827	0.831
4	0.909	0.853	0.831	0.979	0.838	0.931	0.867	0.952	0.883	0.931	0.867	0.883	0.831	0.979	0.952	0.838	0.867	0.931	0.831	0.838	0.883	0.979	0.952	0.838	0.840
5	0.963	0.878	0.893	1.014	0.862	1.002	0.907	0.986	0.914	1.002	0.907	0.914	0.893	1.014	0.986	0.862	0.907	1.002	0.893	0.862	0.914	1.014	0.986	0.862	0.875
6	0.994	0.948	0.930	1.033	0.929	1.043	0.953	1.005	0.949	1.043	0.953	0.949	0.930	1.033	1.005	0.929	0.953	1.043	0.930	0.929	0.949	1.033	1.005	0.929	0.939
7	1.027	0.979	0.978	1.052	0.960	1.097	1.028	1.023	0.976	1.097	1.028	0.976	0.978	1.052	1.023	0.960	1.028	1.097	0.978	0.960	1.052	1.023	1.023	0.960	0.971
8	1.118	1.032	1.003	1.053	1.012	1.126	1.039	1.023	1.042	1.126	1.039	1.042	1.003	1.053	1.023	1.012	1.039	1.126	1.003	1.012	1.042	1.053	1.023	1.012	1.013
9	1.102	1.065	1.019	1.043	1.045	1.141	1.082	1.014	1.044	1.141	1.082	1.044	1.019	1.043	1.014	1.045	1.082	1.141	1.019	1.045	1.044	1.043	1.014	1.045	1.046
10	1.153	1.094	1.077	1.043	1.076	1.206	1.157	1.012	1.140	1.206	1.157	1.140	1.077	1.043	1.012	1.076	1.157	1.206	1.077	1.076	1.140	1.043	1.012	1.076	1.077
11	1.267	1.139	1.097	1.053	1.117	1.232	1.162	1.023	1.193	1.232	1.162	1.193	1.097	1.053	1.023	1.117	1.162	1.232	1.097	1.117	1.193	1.053	1.023	1.117	1.138
12	1.287	1.220	1.187	1.046	1.198	1.329	1.258	1.016	1.193	1.329	1.258	1.193	1.187	1.046	1.016	1.198	1.258	1.329	1.187	1.198	1.193	1.046	1.016	1.198	1.196
13	1.381	1.334	1.187	1.032	1.309	1.332	1.344	1.002	1.201	1.332	1.344	1.201	1.187	1.032	1.002	1.309	1.344	1.332	1.187	1.309	1.201	1.032	1.002	1.309	1.296
14	1.485	1.435	1.233	1.042	1.408	1.384	1.434	1.011	1.220	1.384	1.434	1.220	1.233	1.042	1.011	1.408	1.434	1.384	1.233	1.408	1.220	1.042	1.011	1.408	1.411
15	1.601	1.586	1.322	1.055	1.555	1.483	1.563	1.022	1.248	1.483	1.563	1.248	1.322	1.055	1.022	1.555	1.563	1.483	1.322	1.555	1.248	1.055	1.022	1.555	1.535
16	1.941	1.896	1.305	1.119	1.859	1.519	1.755	1.048	1.346	1.519	1.755	1.346	1.305	1.119	1.048	1.859	1.755	1.519	1.305	1.859	1.346	1.119	1.048	1.859	1.852
17	1.173	1.130	0.990	1.048	1.109	1.111	1.114	1.018	1.140	1.111	1.114	1.140	0.990	1.048	1.018	1.109	1.114	1.111	0.990	1.109	1.140	1.048	1.018	1.109	1.075
18	1.548	1.494	1.235	1.074	1.465	1.388	1.406	1.039	1.257	1.388	1.406	1.257	1.235	1.074	1.039	1.465	1.406	1.388	1.235	1.465	1.257	1.074	1.039	1.465	1.454
19	1.584	1.590	1.268	1.064	1.558	1.427	1.526	1.029	1.244	1.427	1.526	1.244	1.268	1.064	1.029	1.558	1.526	1.427	1.268	1.558	1.244	1.064	1.029	1.558	1.538
20	1.540	1.558	1.266	1.073	1.528	1.424	1.499	1.038	1.308	1.424	1.499	1.308	1.266	1.073	1.038	1.528	1.499	1.424	1.266	1.528	1.308	1.073	1.038	1.528	1.510
21	2.276	2.169	1.381	1.155	2.126	1.661	1.919	1.045	1.423	1.661	1.919	1.423	1.381	1.155	1.045	2.126	1.919	1.661	1.381	2.126	1.423	1.155	1.045	2.126	2.093
22	2.267	2.197	1.401	1.127	2.154	1.658	1.988	1.035	1.419	1.658	1.988	1.419	1.401	1.127	1.035	2.154	1.988	1.658	1.401	2.154	1.419	1.127	1.035	2.154	2.132
23	1.497	1.469	1.246	1.033	1.440	1.400	1.491	1.000	1.183	1.400	1.491	1.183	1.246	1.033	1.000	1.440	1.491	1.400	1.246	1.440	1.183	1.033	1.000	1.440	1.428
24	1.399	1.390	1.123	1.025	1.363	1.262	1.345	0.994	1.144	1.262	1.345	1.144	1.123	1.025	0.994	1.363	1.345	1.262	1.123	1.363	1.144	1.025	0.994	1.363	1.356
25	1.635	1.610	1.289	1.061	1.579	1.450	1.461	1.026	1.240	1.450	1.461	1.240	1.289	1.061	1.026	1.579	1.461	1.450	1.289	1.579	1.240	1.061	1.026	1.579	1.547
26	1.811	1.829	1.383	1.071	1.794	1.560	1.708	1.035	1.281	1.560	1.708	1.281	1.383	1.071	1.035	1.794	1.708	1.560	1.383	1.794	1.281	1.071	1.035	1.794	1.757
Class Total	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Expo Dist of Class	1.5%	14.8%	0.1%	0.0%	73.3%	0.0%	0.1%	0.1%	0.3%	1.0%	0.7%	1.2%	0.1%	0.5%	0.2%	1.6%	0.6%	0.9%	0.1%	0.2%	1.0%	0.5%	0.1%	1.2%	100.0%

**Massachusetts Private Passenger Automobile
Relative Frequency - Bodily Injury Claims as Percent of Property Damage Liability Claims**

2003	Rate Class									
<u>Territory</u>	<u>10</u>	<u>15</u>	<u>17</u>	<u>18</u>	<u>20</u>	<u>21</u>	<u>25</u>	<u>26</u>	<u>30</u>	<u>Total</u>
<u>Non-Boston Territories</u>										
27	20%	18%	28%	19%	29%	23%	24%	21%	15%	20%
1	21%	19%	29%	21%	28%	23%	27%	24%	16%	22%
2	22%	18%	27%	27%	31%	26%	25%	23%	18%	22%
3	22%	19%	24%	25%	36%	24%	26%	24%	22%	23%
4	24%	19%	30%	24%	34%	33%	25%	25%	20%	24%
5	25%	22%	29%	26%	34%	30%	28%	27%	21%	26%
6	25%	22%	29%	32%	27%	28%	32%	27%	22%	25%
7	27%	24%	30%	27%	36%	35%	31%	27%	22%	27%
8	27%	20%	28%	31%	43%	32%	26%	25%	22%	26%
9	28%	22%	31%	30%	38%	36%	32%	29%	24%	28%
10	38%	29%	42%	44%	54%	66%	39%	34%	27%	37%
11	37%	26%	42%	36%	50%	32%	38%	35%	32%	36%
12	32%	25%	32%	35%	46%	32%	31%	32%	27%	32%
13	33%	24%	34%	34%	46%	43%	36%	32%	27%	33%
14	40%	32%	42%	33%	54%	42%	43%	35%	38%	40%
15	55%	40%	61%	57%	77%	67%	57%	49%	36%	55%
16	80%	44%	89%	78%	97%	77%	66%	53%	28%	78%
Total	30%	23%	35%	30%	51%	38%	32%	28%	22%	30%
<u>Boston Territories</u>										
17	34%	25%	40%	35%	89%	50%	45%	48%	40%	34%
18	65%	29%	52%	74%	95%	76%	59%	48%	55%	63%
19	70%	29%	122%	52%	153%	89%	64%	65%	38%	74%
20	71%	44%	72%	54%	114%	45%	47%	60%	67%	69%
21	77%	58%	85%	79%	108%	75%	87%	60%	50%	79%
22	88%	67%	92%	61%	107%	88%	75%	90%	33%	88%
23	44%	28%	65%	44%	83%	52%	54%	32%	33%	46%
24	29%	18%	31%	27%	35%	38%	52%	27%	38%	29%
25	48%	27%	76%	78%	96%	85%	72%	53%	31%	51%
26	44%	31%	63%	44%	59%	49%	40%	49%	17%	44%
Total	58%	38%	72%	54%	100%	66%	65%	51%	40%	60%
<u>Statewide</u>										
Total	33%	24%	38%	31%	61%	41%	33%	28%	23%	32%

Note:

All calculations based on data from AIB, accident years 1999-2001;
each year as of 15 months.

**Massachusetts Private Passenger Automobile
Frequency (per 100 Vehicles) - Bodily Injury**

2003 Territory	Rate Class									Total
	<u>10</u>	<u>15</u>	<u>17</u>	<u>18</u>	<u>20</u>	<u>21</u>	<u>25</u>	<u>26</u>	<u>30</u>	
<u>Non-Boston Territories</u>										
27	0.8	0.7	2.7	1.2	5.3	2.1	3.9	1.9	0.7	0.9
1	0.9	0.9	2.7	1.5	5.1	2.6	4.7	2.4	0.9	1.1
2	1.0	0.8	2.9	1.8	6.6	3.5	4.9	2.5	1.0	1.2
3	1.1	0.9	2.8	1.9	7.9	3.4	5.3	2.8	1.4	1.3
4	1.2	1.0	3.6	1.9	7.8	4.9	5.2	3.2	1.3	1.4
5	1.3	1.1	3.4	2.2	7.8	4.6	6.2	3.5	1.4	1.5
6	1.4	1.3	3.6	2.6	7.1	5.4	6.8	3.7	1.6	1.6
7	1.6	1.3	3.7	2.4	9.1	5.6	7.3	3.8	1.5	1.8
8	1.7	1.2	4.0	2.6	11.5	5.5	6.5	3.6	1.9	1.9
9	1.8	1.4	4.2	2.9	9.9	6.3	8.1	4.7	1.9	2.0
10	2.3	1.7	5.4	4.1	13.5	11.3	10.6	5.1	2.3	2.6
11	2.5	1.8	5.8	3.4	13.8	6.5	10.9	5.8	2.8	2.8
12	2.4	1.7	5.0	3.7	13.8	6.4	8.9	5.7	2.8	2.6
13	2.8	1.8	5.4	3.5	13.1	8.3	9.3	5.1	2.7	2.9
14	3.2	2.2	6.6	3.5	15.2	7.2	12.0	6.2	4.1	3.5
15	5.0	3.0	10.7	7.4	24.1	14.5	17.5	9.8	4.0	5.5
16	8.1	3.5	14.8	8.3	28.1	17.9	17.1	9.7	4.3	8.7
Total	1.8	1.3	4.5	2.5	13.4	6.1	7.2	3.6	1.6	2.0
<u>Boston Territories</u>										
17	2.3	1.7	7.0	3.3	21.3	8.7	10.0	6.4	2.7	2.5
18	6.5	2.4	8.6	7.9	36.2	23.3	17.1	8.8	6.8	6.8
19	6.3	2.3	24.6	6.5	59.9	19.7	20.0	11.3	4.4	7.3
20	7.2	3.3	13.6	8.5	45.7	11.0	12.1	11.9	6.9	7.5
21	9.4	5.1	21.1	12.2	40.5	19.1	35.0	13.6	6.9	10.8
22	12.0	7.1	21.4	13.8	39.3	17.4	24.6	22.0	6.6	13.5
23	3.2	2.3	10.2	4.8	27.1	7.9	15.5	5.4	2.5	3.6
24	2.7	1.4	4.5	4.0	10.3	6.6	17.2	4.1	5.4	2.9
25	4.0	2.2	14.9	7.9	32.6	8.3	30.1	10.1	3.0	4.7
26	4.7	2.7	15.4	6.5	20.1	11.5	14.2	10.1	2.0	5.2
Total	5.6	3.1	14.4	7.2	36.1	14.3	21.5	9.3	4.3	6.4
<u>Statewide</u>										
Total	2.0	1.4	5.0	2.7	16.8	6.9	7.5	3.7	1.7	2.2

Note:

All calculations based on data from AIB, accident years 1999-2001;
each year as of 15 months.

**Massachusetts Private Passenger Automobile
Frequency (per 100 Vehicles) - Property Damage Liability**

2003	Rate Class									Total
<u>Territory</u>	<u>10</u>	<u>15</u>	<u>17</u>	<u>18</u>	<u>20</u>	<u>21</u>	<u>25</u>	<u>26</u>	<u>30</u>	
<u>Non-Boston Territories</u>										
27	4.0	4.0	9.6	6.0	17.9	9.4	16.5	9.2	5.0	4.5
1	4.3	4.5	9.6	7.0	18.2	11.3	17.4	10.1	5.2	4.9
2	4.7	4.6	10.8	6.8	21.6	13.3	19.3	10.6	5.8	5.3
3	4.9	5.0	11.7	7.6	21.9	14.5	20.3	11.5	6.3	5.6
4	5.3	5.2	12.3	7.8	23.1	14.8	20.3	12.9	6.8	5.9
5	5.2	5.1	12.0	8.2	23.1	15.4	21.8	12.9	6.9	6.0
6	5.5	5.9	12.6	8.1	26.5	19.1	21.5	13.7	7.6	6.4
7	5.7	5.6	12.5	8.9	25.4	15.8	24.0	14.3	6.8	6.5
8	6.4	6.0	14.2	8.4	26.7	17.6	25.1	14.4	8.5	7.1
9	6.6	6.3	13.3	9.8	26.4	17.7	25.1	16.0	8.3	7.3
10	6.1	5.9	12.8	9.2	25.0	17.1	26.7	14.9	8.4	7.0
11	6.8	6.8	13.7	9.5	27.4	20.5	28.5	16.4	8.7	7.7
12	7.4	6.8	15.7	10.6	30.1	19.9	28.4	17.9	10.6	8.3
13	8.3	7.6	15.8	10.5	28.4	19.4	25.9	16.0	9.8	9.0
14	8.1	6.7	15.8	10.5	28.2	17.3	27.8	18.1	10.6	8.9
15	9.0	7.5	17.5	12.8	31.4	21.6	30.6	20.0	11.3	10.0
16	10.1	7.9	16.7	10.6	28.9	23.2	26.1	18.5	15.2	11.1
Total	5.8	5.6	12.9	8.3	26.3	16.4	22.5	13.0	7.0	6.6
<u>Boston Territories</u>										
17	6.9	6.8	17.5	9.6	23.9	17.5	22.5	13.4	6.8	7.4
18	9.9	8.3	16.5	10.6	38.2	30.8	28.9	18.3	12.4	10.7
19	9.0	8.0	20.2	12.4	39.3	22.1	31.2	17.4	11.6	9.8
20	10.1	7.6	19.0	15.9	40.2	24.5	25.8	19.9	10.4	10.8
21	12.2	8.8	24.9	15.4	37.6	25.5	40.1	22.7	13.8	13.7
22	13.6	10.6	23.3	22.6	36.9	19.7	32.8	24.3	19.9	15.3
23	7.1	8.3	15.7	11.0	32.7	15.3	28.8	17.1	7.4	7.9
24	9.5	8.0	14.7	15.0	29.5	17.5	33.3	15.2	14.3	10.0
25	8.3	7.8	19.6	10.1	33.9	9.8	41.8	19.1	9.8	9.2
26	10.8	8.7	24.4	15.0	34.3	23.4	35.2	20.7	11.6	11.8
Total	9.7	8.2	20.0	13.3	36.3	21.8	33.2	18.2	10.8	10.6
<u>Statewide</u>										
Total	6.0	5.7	13.3	8.5	27.8	16.8	22.8	13.1	7.2	6.8

Note:

All calculations based on data from AIB, accident years 1999-2001;
each year as of 15 months.

MASSACHUSETTS PRIVATE PASSENGER AUTOMOBILE
Territorial Definitions

Town	03/04	01/02	99/00	97/98	95/96	93/94	91/92	1990	Town	03/04	01/02	99/00	97/98	95/96	93/94	91/92	1990	Town	03/04	01/02	99/00	97/98	95/96	93/94	91/92	1990	Town	03/04	01/02	99/00	97/98	95/96	93/94	91/92	1990	
Code Town Name	Terr	Terr	Terr	Terr	Terr	Terr	Terr	Terr	Code Town Name	Terr	Terr	Terr	Terr	Terr	Terr	Terr	Terr	Code Town Name	Terr	Terr	Terr	Terr	Terr	Terr	Terr	Terr	Code Town Name	Terr	Terr	Terr	Terr	Terr	Terr	Terr	Terr	
630 Acton	27	27	1	27	1	2	3	3	479 Monroe	27	27	27	27	27	1	1	1	140 Williamstown	27	27	27	27	27	1	1	1	52 Dennis	2	3	3	4	3	4	3	2	
170 Alford	27	1	2	1	27	1	1	1	411 Montague	27	27	27	27	1	2	2	1	186 Windsor	27	27	27	1	27	1	1	1	937 Douglas	2	3	3	2	3	4	3	4	
470 Ashfield	27	27	27	27	27	1	1	1	175 Monterey	27	27	27	27	27	1	1	1	582 Worthington	27	27	1	27	27	1	1	1	511 Easthamptor	2	3	3	3	3	3	3	3	
933 Berlin	27	27	1	1	1	2	3	4	176 Mount Wash	27	27	1	27	27	1	1	1	110 Adams	1	27	27	27	27	1	2	3	912 Gardner	2	3	2	3	4	5	4	4	
471 Bernardston	27	27	27	27	27	1	1	1	56 Nantucke	27	27	27	27	27	1	1	1	670 Ashby	1	27	1	2	1	2	3	3	331 Georgetown	2	2	2	2	2	2	2	3	
970 Bolton	27	1	1	27	27	1	1	1	177 New Ashford	27	1	2	3	2	2	1	1	910 Athol	1	27	1	2	2	3	3	2	492 Granville	2	3	2	1	1	2	1	1	
80 Brewster	27	27	1	1	1	2	2	1	480 New Salem	27	27	1	2	3	4	3	2	671 Boxborough	1	1	1	1	2	3	4	5	332 Groveland	2	2	2	3	4	4	5	6	
672 Carlisle	27	27	27	27	27	1	2	3	339 Newbury	27	1	1	27	27	1	2	3	430 Bucklanc	1	27	27	27	27	1	1	1	940 Holden	2	2	1	27	1	1	1	2	
472 Charlemoni	27	27	1	1	27	1	2	2	949 Northborougl	27	1	2	1	2	3	3	3	733 Dover	1	2	2	1	2	3	4	5	637 Holliston	2	2	3	3	2	2	2	3	
51 Chatham	27	27	27	27	27	1	1	1	434 Northfield	27	27	27	27	27	1	1	1	973 East Brookfie	1	27	1	2	3	4	5	5	315 Ipswich	2	2	2	3	2	2	2	3	
130 Cheshire	27	27	1	1	1	2	3	3	57 Oak Bluffs	27	27	27	27	27	1	1	1	713 Franklin	1	1	2	3	4	4	5	6	477 Leverett	2	3	3	2	1	1	2	1	
570 Chesterfield	27	27	27	27	27	1	2	2	58 Orleans	27	27	27	27	27	1	1	1	111 Great Barrin	1	1	2	3	4	5	4	3	617 Lexington	2	2	3	2	1	2	3	3	
81 Chilmark	27	27	27	27	27	1	1	1	642 Pepperell	27	27	1	1	1	2	2	3	410 Greenfield	1	27	27	1	2	2	1	1	945 Lunenburg	2	3	2	2	2	2	3	4	
131 Clarksburg	27	27	27	27	27	1	1	2	978 Petersham	27	27	27	1	27	1	1	1	531 Hadley	1	2	3	4	3	2	1	1	335 Manchester	2	1	27	27	1	1	1	2	
431 Colrain	27	27	27	27	27	1	1	1	979 Phillipston	27	1	2	3	2	2	2	3	333 Hamilton	1	2	1	27	27	1	1	1	2	737 Medway	2	2	2	2	3	4	4	4
613 Concord	27	27	27	27	1	2	2	2	578 Plainfield	27	27	27	1	2	2	1	1	476 Heath	1	2	2	1	2	2	1	1	336 Merrimac	2	1	1	1	2	3	4	3	
473 Conway	27	27	27	27	27	1	2	1	980 Princeton	27	27	27	27	27	1	1	1	133 Hinsdale	1	2	2	3	3	3	2	3	4	947 Millville	2	3	3	3	3	3	3	4
571 Cummington	27	27	1	27	27	1	1	1	181 Richmond	27	1	2	1	27	1	2	2	494 Holland	1	2	3	4	5	4	3	2	422 Monson	2	3	4	4	4	3	3	3	
132 Dalton	27	27	27	27	1	2	2	3	481 Rowe	27	27	27	27	27	1	1	1	942 Hubbardston	1	1	27	27	1	2	3	3	3	112 North Adams	2	1	2	2	3	4	5	4
432 Deerfield	27	27	27	27	27	1	1	1	981 Royalston	27	1	1	2	3	3	2	3	134 Lanesboroung	1	2	2	3	1	3	3	3	976 Oakham	2	2	2	2	1	2	3	4	
673 Dunstable	27	27	1	2	3	3	2	3	182 Sandisfield	27	1	2	3	4	3	2	2	736 Medfield	1	2	2	1	2	3	4	5	179 Otis	2	1	27	1	2	1	2	2	
82 Eastham	27	27	27	27	27	1	1	1	183 Savoy	27	1	2	1	1	2	3	2	738 Millis	1	1	1	2	2	2	3	4	59 Provincetown	2	3	2	2	3	4	5	6	
53 Edgartown	27	27	27	27	27	1	1	1	137 Sheffield	27	27	27	1	2	2	1	2	495 Montgomery	1	2	3	4	4	3	2	2	341 Rowley	2	2	1	2	2	2	2	3	
172 Egremont	27	1	2	2	2	3	2	2	643 Shirley	27	1	2	1	2	3	4	4	975 New Braintree	1	27	27	27	1	2	2	3	60 Sandwich	2	2	3	3	2	3	2	2	
433 Erving	27	27	27	27	1	2	2	1	482 Shutesbury	27	27	1	2	3	3	3	3	178 New Marlbor	1	27	27	27	1	2	1	1	580 Southamptor	2	2	2	1	1	1	2	2	
173 Florida	27	27	27	27	27	1	2	2	952 Southboroug	27	27	1	2	3	3	3	3	318 Newburyport	1	1	1	2	3	3	4	5	138 Stockbridge	2	1	27	1	2	3	2	3	
83 Gay Head	27	1	2	1	27	1	1	2	953 Sterling	27	27	27	27	27	1	1	1	739 Norfolk	1	1	1	1	1	2	3	4	954 Sturbridge	2	1	2	3	3	3	3	3	
474 Gill	27	27	27	27	27	1	1	1	644 Stow	27	27	27	27	27	1	2	3	948 North Brookf	1	1	1	2	3	4	4	5	955 Sutton	2	2	3	3	2	3	4	4	
573 Goshen	27	27	27	27	27	1	2	2	956 Templeton	27	27	27	27	1	2	1	2	412 Orange	1	1	2	2	2	3	2	3	371 Topsfield	2	2	1	27	1	2	3	3	
84 Gosnold	27	27	27	27	27	1	1	1	61 Tisbury	27	27	1	27	27	1	1	2	577 Pelham	1	2	3	4	4	3	2	2	497 Wales	2	3	4	5	5	4	3	4	
636 Groton	27	27	27	27	27	1	1	1	496 Tolland	27	27	1	2	2	3	2	1	180 Peru	1	2	3	2	1	2	2	2	649 Wayland	2	2	3	2	1	1	2	3	
174 Hancock	27	1	27	27	1	2	2	2	647 Townsend	27	1	1	27	27	1	1	2	43 Rochester	1	1	2	3	3	3	3	3	2	720 Wellesley	2	2	2	2	2	2	3	3
939 Hardwick	27	27	1	2	3	2	1	2	86 Truro	27	27	1	1	1	1	1	1	435 Shelburne	1	1	27	27	27	1	1	2	534 Williamsburg	2	1	27	27	1	2	1	2	
974 Harvard	27	27	27	27	27	1	1	1	184 Tyringham	27	27	27	27	1	2	2	1	645 Sudbury	1	1	1	1	2	3	4	4	924 Winchendon	2	2	2	2	3	4	3	3	
55 Harwich	27	1	2	2	1	1	1	1	957 Upton	27	27	27	27	1	2	2	3	921 Uxbridge	1	27	1	2	2	3	3	4	311 Andover	3	4	5	5	4	4	4	4	
532 Hatfield	27	27	27	27	27	1	1	1	483 Warwick	27	27	1	27	27	1	1	2	343 Wenham	1	2	3	2	1	2	3	4	171 Becket	3	3	4	5	5	4	3	3	
475 Hawley	27	27	27	27	27	1	1	1	185 Washington	27	27	27	1	2	3	2	3	960 West Brookfi	1	27	27	1	2	2	3	3	530 Belchertown	3	3	4	5	5	5	4	4	
638 Hopkinton	27	27	1	1	1	2	2	3	87 Wellfleet	27	27	27	27	27	1	1	1	743 Wrentham	1	2	3	3	3	3	4	4	5	731 Bellingham	3	4	3	3	4	5	5	5
135 Lee	27	27	27	27	27	1	1	2	3	484 Wendel	27	1	2	1	2	3	2	1	310 Amesbury	2	2	3	2	3	3	4	5	490 Blandford	3	3	2	3	3	3	2	1
136 Lenox	27	1	2	2	2	2	3	3	344 West Newbu	27	27	27	27	27	1	1	2	930 Ashburnham	2	2	2	1	2	3	3	4	370 Boxford	3	3	2	1	2	1	2	3	
478 Leyden	27	27	27	27	27	1	1	1	139 West Stockb	27	1	1	27	1	2	1	1	632 Ayer	2	3	4	3	3	3	4	4	5	971 Boylston	3	3	2	2	3	3	3	4
639 Lincoln	27	27	1	27	27	1	2	3	88 West Tisbury	27	27	27	27	27	1	1	1	932 Barre	2	1	1	2	3	4	4	4	4	491 Brimfield	3	4	5	4	5	4	3	2
640 Littleton	27	27	27	27	27	1	1	2	650 Westford	27	27	27	27	1	2	3	3	633 Bedford	2	3	3	2	2	2	3	4	5	936 Charlton	3	4	4	4	5	6	6	6
620 Maynard	27	1	2	1	2	3	4																													

MASSACHUSETTS PRIVATE PASSENGER AUTOMOBILE
Territorial Definitions

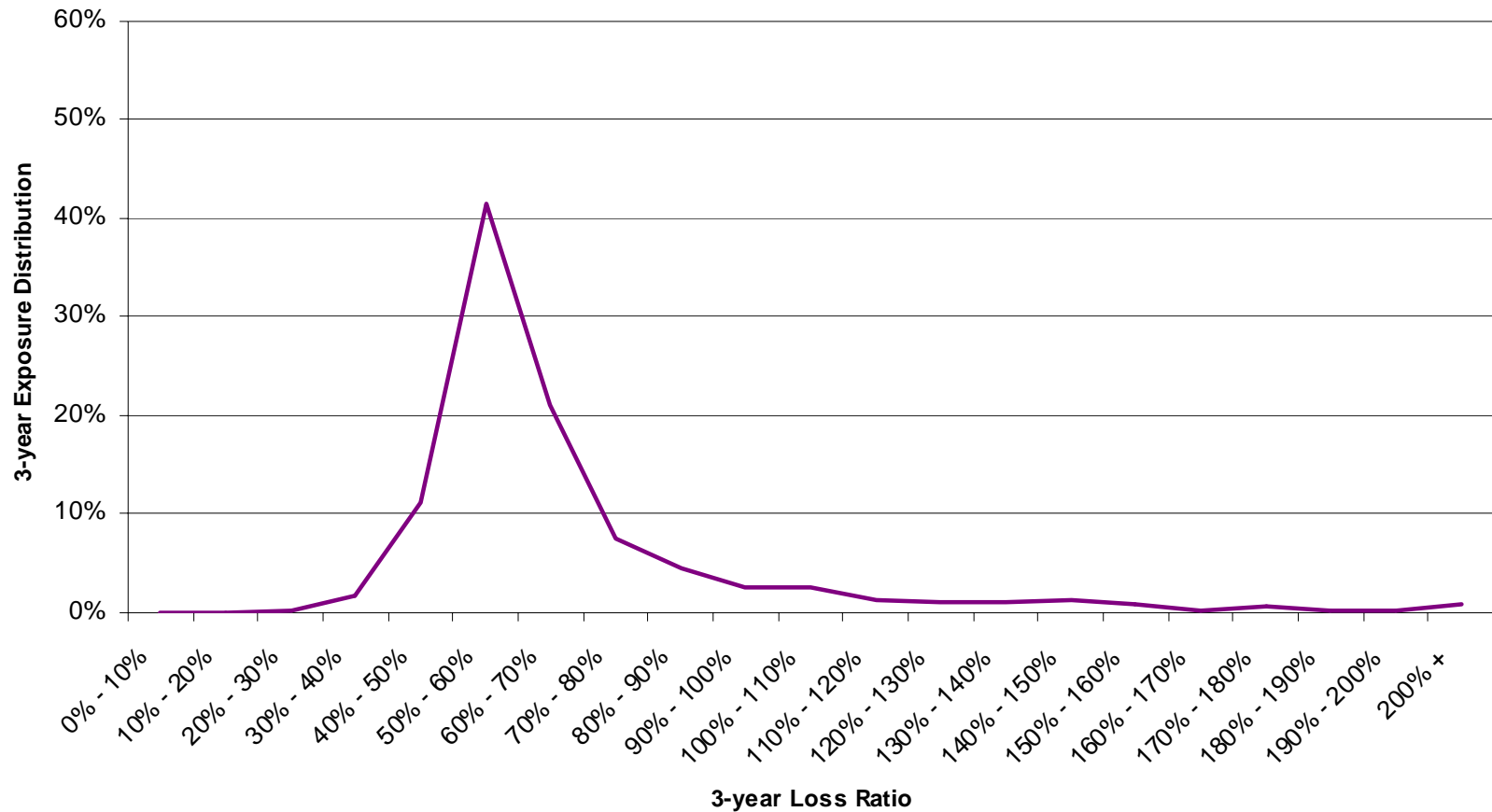
Town	03/04	01/02	99/00	97/98	95/96	93/94	91/92	1990	Town	03/04	01/02	99/00	97/98	95/96	93/94	91/92	1990	Town	03/04	01/02	99/00	97/98	95/96	93/94	91/92	1990	Town	03/04	01/02	99/00	97/98	95/96	93/94	91/92	1990	
Code Town Name	Terr	Terr	Terr	Terr	Terr	Terr	Terr	Terr	Code Town Name	Terr	Terr	Terr	Terr	Terr	Terr	Terr	Terr	Code Town Name	Terr	Terr	Terr	Terr	Terr	Terr	Terr	Terr	Code Town Name	Terr	Terr	Terr	Terr	Terr	Terr	Terr	Terr	
31 Duxbury	3	3	3	3	2	3	3	4	740 Plainville	4	3	3	4	5	5	4	4	441 East Longme	6	6	6	6	6	5	4	3	721 Weymouth	9	8	8	8	8	8	8	8	
330 Essex	3	2	1	27	1	2	3	3	71 Plympton	4	5	5	5	4	5	5	6	70 Halifax	6	6	6	6	6	5	6	7	7	402 Chicopee	10	10	10	9	8	7	6	5
54 Falmouth	3	4	4	3	3	4	4	4	237 Seekonk	4	5	5	6	6	5	4	4	34 Hanson	6	5	5	6	6	6	7	8	8	320 Peabody	10	10	10	9	8	9	9	9
734 Foxborough	3	3	3	3	4	5	5	5	919 Southbridge	4	4	5	6	7	7	6	6	944 Leicester	6	6	6	7	8	8	7	7	7	425 West Springf	10	10	11	10	9	8	7	6
913 Grafton	3	3	3	3	3	4	5	4	920 Spencer	4	4	5	6	6	6	6	5	13 Middleboro	6	6	7	7	7	7	7	8	201 Fall River	11	11	10	11	12	12	11	10	
574 Granby	3	4	4	3	3	4	4	3	648 Tyngsborou	4	4	5	6	6	7	7	6	337 Middleton	6	5	4	5	5	5	5	6	317 Methuen	11	11	12	11	10	10	9	8	
941 Hopedale	3	2	1	1	2	3	4	5	742 Westwood	4	4	4	4	4	4	5	6	605 Newton	6	7	6	6	5	6	6	7	714 Milton	11	11	10	9	8	9	9	9	
616 Hudson	3	3	4	3	3	4	5	6	652 Wilmington	4	5	6	6	6	7	8	8	716 Norwood	6	7	7	7	6	6	6	7	718 Stoughton	11	11	10	10	10	10	11	10	
533 Huntington	3	2	3	4	5	4	3	3	62 Yarmouth	4	4	4	5	5	5	4	3	14 Plymouth	6	6	6	6	6	6	6	6	604 Medford	12	12	12	12	11	11	11	12	
943 Lancaster	3	4	3	3	4	5	4	4	510 Amherst	5	6	5	4	3	3	4	3	741 Sharon	6	6	7	6	5	6	7	7	200 New Bedford	12	12	12	13	13	13	12	11	
40 Mattapoisett	3	2	1	2	3	4	4	4	210 Attleboro	5	5	6	6	6	7	6	6	239 Swansea	6	7	6	6	7	7	6	6	703 Quincy	12	11	12	11	10	11	11	11	
621 Natick	3	3	4	5	4	5	6	6	21 Barnstable	5	5	5	6	5	5	5	4	240 Westport	6	5	6	6	7	8	7	6	304 Salem	12	12	12	12	11	11	10	10	
715 Needham	3	3	3	3	2	2	3	3	231 Berkley	5	5	5	5	6	6	5	5	230 Acushnet	7	7	6	7	8	8	7	7	321 Saugus	12	12	13	12	11	11	11	11	
215 North Attlebc	3	3	4	5	4	5	5	5	312 Beverley	5	5	5	5	4	4	5	6	420 Agawam	7	7	8	8	8	7	6	5	600 Cambridge	13	13	12	11	11	12	12	12	
512 Northampton	3	4	4	3	2	3	3	3	634 Billerica	5	5	6	7	7	8	8	9	211 Dartmouth	7	7	7	7	8	8	7	6	403 Holyoke	13	14	14	13	12	11	10	9	
917 Northbridge	3	3	3	3	3	4	4	3	635 Burlington	5	6	6	6	5	6	7	8	614 Dracut	7	8	9	9	9	9	9	8	606 Somerville	13	13	14	14	14	14	14	15	
622 Reading	3	3	4	4	3	4	5	5	911 Clinton	5	4	4	3	4	5	6	7	212 Easton	7	7	7	8	7	7	7	7	810 Winthrop	13	13	13	13	13	13	13	13	
236 Rehoboth	3	4	5	4	5	6	5	5	232 Dighton	5	4	5	6	6	6	5	4	213 Fairhaven	7	6	7	8	9	9	8	7	900 Worcester	13	13	13	13	12	12	11	10	
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443 Russell	3	3	4	5	6	5	6	5	314 Gloucester	5	5	5	5	5	5	6	7	421 Ludlow	7	7	7	8	8	7	6	5	603 Malden	14	14	14	14	13	13	13	13	
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436 Sunderland	3	3	2	1	27	1	1	2	12 Hingham	5	5	5	4	5	6	7	7	619 Melrose	7	8	8	8	7	7	8	9	602 Everett	15	15	14	14	14	14	14	15	
719 Walpole	3	3	3	3	3	4	5	6	37 Lakeville	5	5	6	6	6	6	6	6	235 Raynham	7	7	7	8	7	6	5	4	300 Lynn	15	15	15	14	14	14	14	13	
514 Ware	3	4	5	5	4	5	5	5	442 Longmeadow	5	6	5	5	5	5	4	3	16 Wareham	7	8	8	8	8	7	7	8	803 Revere	15	15	15	15	15	16	16	16	
958 Warren	3	2	1	2	3	4	5	5	85 Mashpee	5	6	7	7	7	6	6	5	608 Watertown	7	7	7	8	7	8	9	10	400 Springfield	15	15	15	15	15	14	13	12	
959 West Boylston	3	2	2	2	1	1	2	2	915 Milford	5	5	5	6	6	6	6	6	17 Whitman	7	7	7	8	7	8	8	9	802 Chelsea	16	16	16	16	15	16	16	16	
923 Westborough	3	2	2	3	3	4	5	5	916 Millbury	5	6	6	6	5	6	7	6	626 Woburn	7	7	8	7	6	6	7	8	303 Lawrence	16	16	16	16	16	15	15	14	
651 Weston	3	3	3	3	3	3	3	4	319 North Andov	5	5	5	5	4	5	5	5	10 Abington	8	7	7	8	8	9	10	9	815 West Roxbur	17	17	17	17	17	17	17	17	
625 Winchester	3	4	3	4	4	4	5	6	41 Norwell	5	4	3	3	3	4	5	5	710 Braintree	8	8	8	8	7	8	8	9	816 Roslindale	18	18	18	18	18	18	18	18	
610 Arlington	4	5	5	5	5	6	6	7	950 Oxford	5	6	5	6	6	5	6	6	711 Canton	8	8	7	7	6	7	8	8	817 Jamaica Plai	19	19	19	19	19	19	19	19	
931 Aubur	4	4	5	5	5	5	5	5	42 Pembroke	5	6	7	7	7	8	8	9	712 Dedham	8	9	8	8	8	8	8	8	818 Hyde Park	20	20	20	20	20	20	20	20	
611 Belmont	4	4	4	3	4	4	5	5	342 Salisbury	5	6	7	6	5	6	7	7	32 East Bridgew	8	7	6	7	7	7	7	6	819 Dorchester	21	21	21	21	21	21	21	21	
50 Bourne	4	4	4	4	3	3	3	3	44 Scituate	5	4	4	5	6	7	8	8	623 Stoneham	8	8	8	8	7	8	8	8	820 Roxbury	22	22	22	22	22	22	22	22	
313 Danvers	4	4	4	4	3	4	5	5	918 Shrewsbury	5	5	6	6	5	5	5	6	607 Waltham	8	8	9	9	8	8	8	9	821 Boston Cent	23	23	23	23	23	23	23	23	
36 Kingston	4	5	4	5	6	6	6	6	238 Somerset	5	5	5	6	7	7	6	5	45 West Bridgew	8	8	7	6	7	8	7	6	822 Brighton	24	24	24	24	24	24	24	24	
914 Leominster	4	5	4	4	3	3	4	5	513 South Hadley	5	5	6	5	4	4	3	3	730 Avon	9	8	8	9	9	8	8	9	823 South Bostor	25	25	25	25	25	25	25	25	
214 Mansfield	4	5	5	4	4	5	5	6	444 Southwick	5	6	7	6	5	5	6	7	702 Brookline	9	10	10	9	8	9	10	11	824 East Boston	26	26	26	26	26	26	26	26	
316 Marblehead	4	4	3	4	4	4	3	4	646 Tewksbury	5	6	6	6	6	7	8	8	615 Framingham	9	9	9	9	8	8	8	8										
38 Marion	4	3	2	3	4	3	2	2	624 Wakefield	5	6	6	6	5	5	6	7	302 Haverhill	9	8	8	9	9	9	10	10										
618 Marlborough	4	4	4	4	5	6	7	7	922 Webster	5	5	5	6	6	6	6	6	735 Holbrook	9	9	10	10	9	10	10	11										
641 North Readin	4	4	4	4	4	5	6	7	424 Westfield	5	5	6	6	6	6	6	5	35 Hull	9	9	10	11	12	13	13	13										
234 Norton	4	5	5	5	6	6	6	6	445 Wilbraham	5	6	6	6	5	5	5	4	338 Nahant	9	9	8	9	8	8	9	10										
423 Palmer	4	5	6	6	6	6	5	4	631 Ashlanc	6	5	5	5	5	6	6	6	15 Rockland	9	8	8	8	8	9	10	10	10									
977 Paxton	4	4	4	4	3	2	3	4	11 Bridgewater	6	6	7	7	7	7	7	7	322 Swampscott	9	9	9	8	7	7	7	8										
102 Pittsfield	4	3	4	4	4	5	5	6	30 Carver	6	7	7	6	7	8	8	7	202 Taunton	9	8	9	9	8	8	8	8	</									

Agency Results

Appendix C

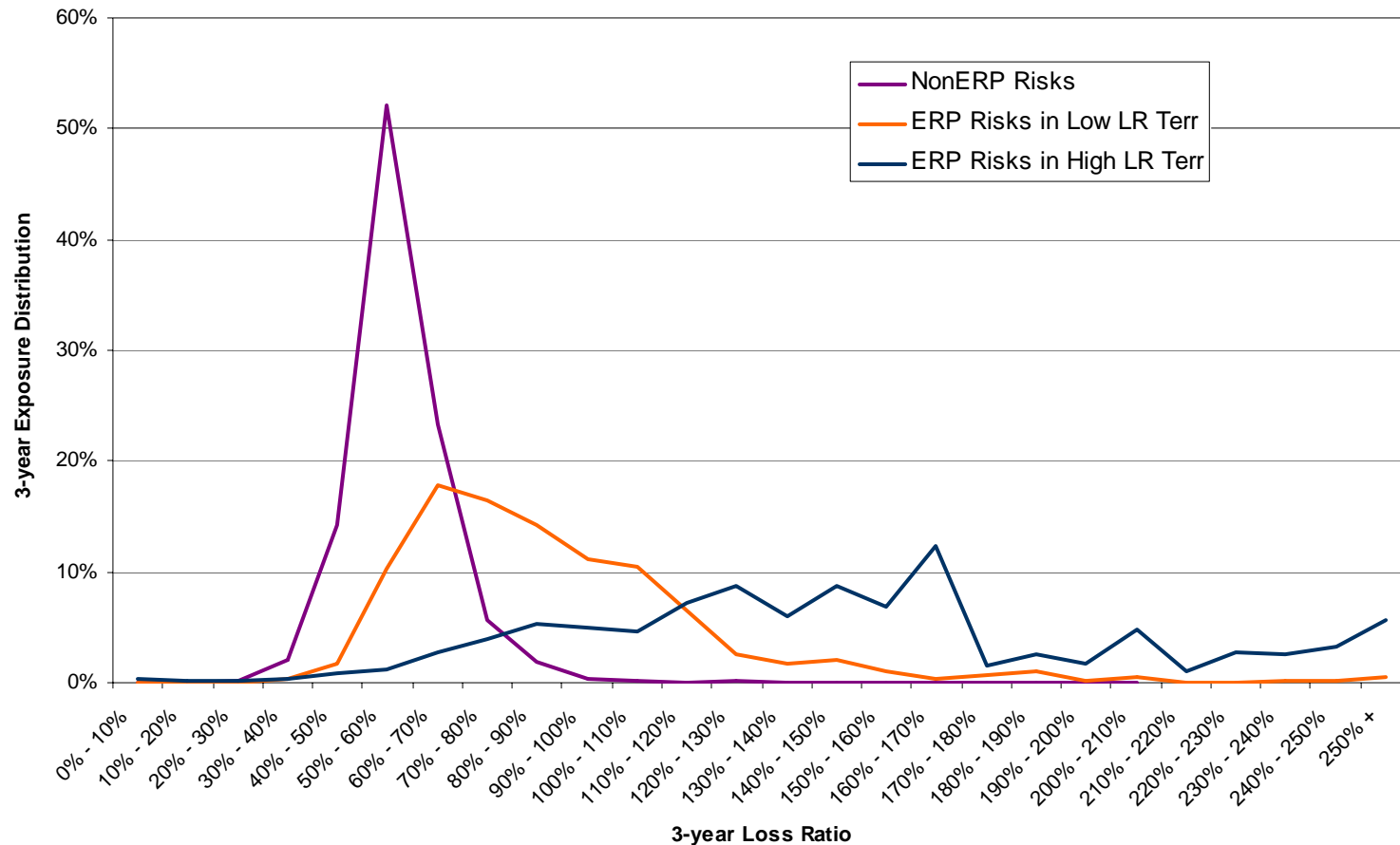
The 2000-2002 exposure distribution by agency loss ratio shows 74% in the 40%-70% range, but also a long tail

Exposure Distribution by Agency Loss Ratio (All Agents)



When split between non-ERP, ERP exposures into High Loss Ratio Territories (15, 16 and six of the ten Boston Territories) and ERP Low (all others) significant differences among all three groups is shown

Distribution of Exposures by Agency Loss Ratio



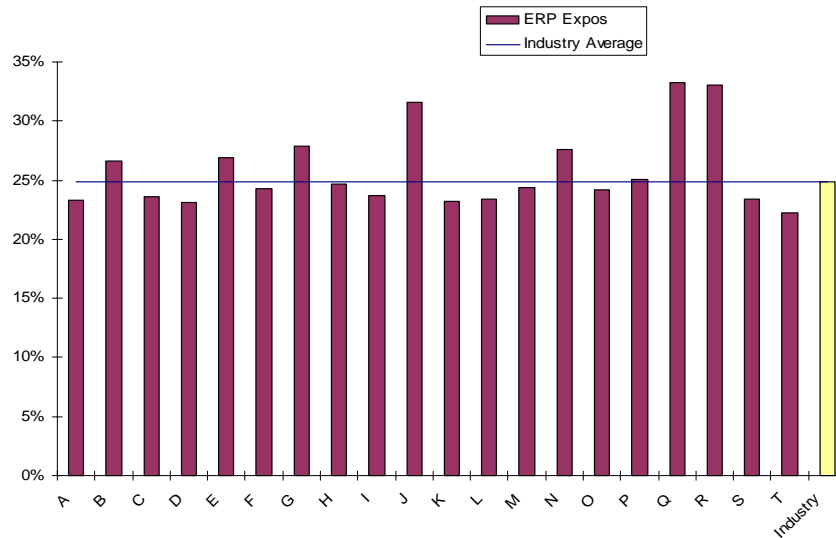
This table offers another perspective on the differences among the three groups

	Non ERP Risks	ERPs in Low LR Territories	ERPs in Higher LR Territories
Below 70%	92%	30%	6%
70% - 100%	8%	42%	14%
100% - 150%	0%	23%	35%
Over 150%	0%	5%	45%
Total	100%	100%	100%
Total Actual Loss Ratio	58%	90%	153%
Expected Loss Ratio	68%	70%	103%

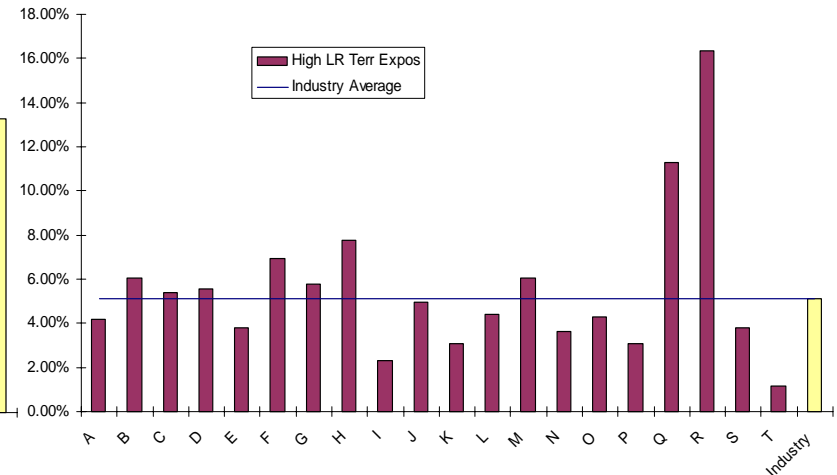
Note: This chart and the prior graphs all based on 2000-2002 written exposures and accident year loss ratios.

ERP assignments' equity looks very different if ERP exposures are split by territory

2002 ERP Expos as Percentage of Total Book (Subscription)



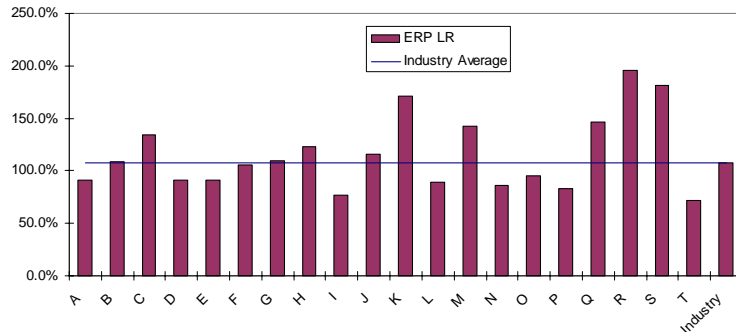
2002 ERP Expos in High LR Territories as Percentage of Total Book (Subscription)



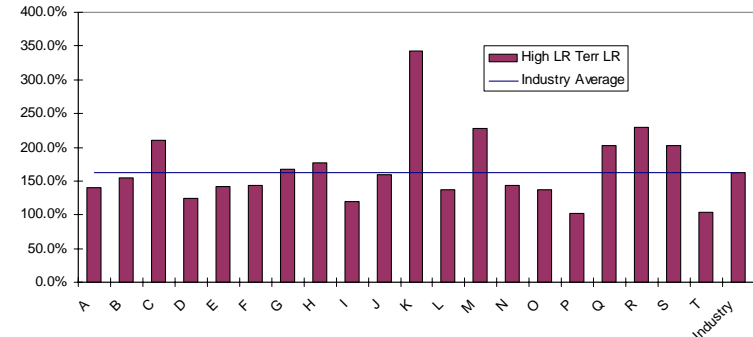
- Except for a few carriers, overall ERP assignments do not vary much from the average of 25% of the carrier's total book.
- When assignments are viewed for High LR Territory ERP exposures, we see that some carriers have either more than double or else less than half of the 5% average.

The ERP Loss Ratios Vary Significantly by Insurance Company, Both for All ERPs and for ERPs in High LR Territories

2000-2002 Ultimate Loss Ratios for All ERPs



2000-2002 Ultimate Loss Ratios for ERPs in High LR Territories



- Company K, with the highest loss ratio from ERPs in the high loss ratio territories, has an overall loss ratio (all territories, all producers) that is four points above where it would be, if its ERPs in these territories had the average loss ratio
- Conversely, Company P has the lowest loss ratio from this category, which produces a one and a half point improvement in overall loss ratio for the company

ERPs with 3-Year Average Exposures in High Loss Ratio Territories Over 50 and
with a 3-Year Average Loss & ALAE Ratio Over 120% in these territories:

Agency Location (Town & Terr)		3-Year Average Exposures			3-Year Loss Ratio			Average Loss Ratio in Territory
		High LR Territory	Low LR Territory	Total	High LR Territory	Low LR Territory	Total	
Danvers	4	306	4,270	4,576	124%	73%	78%	60.2%
Danvers	4	177	1,716	1,893	146%	80%	88%	60.2%
Wilmington	4	66	831	897	120%	95%	98%	60.2%
Southwick	5	96	971	1,067	120%	77%	82%	59.2%
Wakefield	5	62	755	817	153%	99%	104%	59.2%
Wilbraham	5	181	772	953	155%	65%	86%	59.2%
Bridgewater	6	279	1,954	2,233	136%	88%	96%	65.7%
Chestnut Hill	6	1,522	3,335	4,857	124%	91%	104%	65.7%
East Longmeadow	6	106	390	496	156%	68%	92%	65.7%
Newton	6	66	1,156	1,222	133%	73%	77%	65.7%
Norwood	6	607	2,776	3,383	130%	88%	98%	65.7%
Norwood	6	1,383	3,384	4,767	144%	98%	116%	65.7%
Watertown	7	505	4,733	5,238	164%	101%	109%	60.8%
Watertown	7	4,569	4,164	8,733	157%	108%	136% x	60.8%
Whitman	7	273	1,248	1,521	215%	73%	107%	60.8%
Braintree	8	108	669	777	139%	89%	97%	64.2%
Braintree	8	176	1,477	1,653	188%	94%	107%	64.2%
Canton	8	179	784	964	158%	106%	118%	64.2%
Brookline	9	128	809	937	124%	71%	80%	71.6%
Brookline	9	141	472	613	178%	79%	108%	71.6%
Brookline	9	73	1,145	1,218	242%	144%	151% x	71.6%
Framingham	9	3,772	10,728	14,500	227%	119%	152% x	71.6%
Rockland	9	70	735	805	124%	108%	110%	71.6%
Peabody	10	189	2,041	2,229	145%	114%	118%	73.5%
West Springfield	10	179	607	785	120%	76%	89%	73.5%
West Springfield	10	346	724	1,070	135%	84%	103%	73.5%
Fall River	11	202	5,803	6,004	137%	83%	85%	61.0%
Methuen	11	603	1,822	2,425	125%	63%	82%	61.0%
Methuen	11	716	644	1,360	169%	128%	153% x	61.0%
Methuen	11	444	392	836	205%	131%	177% x	61.0%
Methuen	11	430	569	999	201%	187%	194% x	61.0%
Stoughton	11	255	2,182	2,437	143%	87%	94%	61.0%
Stoughton	11	88	663	751	180%	78%	94%	61.0%
Stoughton	11	153	836	989	182%	115%	128% x	61.0%
Medford	12	81	1,348	1,429	122%	83%	85%	78.9%
Medford	12	51	543	594	129%	102%	104%	78.9%
Quincy	12	87	1,086	1,172	127%	86%	90%	78.9%
Salem	12	105	1,136	1,241	128%	80%	85%	78.9%
Salem	12	54	655	709	224%	115%	125% x	78.9%
Cambridge	13	87	1,726	1,813	121%	51%	55%	69.3%
Cambridge	13	101	1,639	1,740	154%	74%	80%	69.3%
Cambridge	13	132	2,730	2,862	123%	83%	85%	69.3%
Cambridge	13	224	874	1,099	162%	186%	181% x	69.3%
Holyoke	13	1,735	2,165	3,900	130%	96%	113%	69.3%
Holyoke	13	331	1,548	1,878	150%	140%	142% x	69.3%
Holyoke	13	126	718	844	163%	185%	181% x	69.3%
Somerville	13	51	520	571	157%	71%	81%	69.3%
Somerville	13	89	692	782	124%	75%	81%	69.3%
Somerville	13	530	1,665	2,195	126%	91%	100%	69.3%
Winthrop	13	139	389	528	131%	67%	88%	69.3%
Winthrop	13	245	583	828	136%	103%	114%	69.3%
Lowell	14	153	2,167	2,320	243%	136%	144% x	80.6%
Lowell	14	1,055	1,296	2,352	158%	134%	146% x	80.6%
Lowell	14	65	1,004	1,069	181%	144%	147% x	80.6%
Lowell	14	88	992	1,080	239%	141%	151% x	80.6%
Lowell	14	96	2,719	2,815	208%	153%	155% x	80.6%
Malden	14	333	1,621	1,954	139%	92%	101%	80.6%
Malden	14	204	1,092	1,296	120%	102%	105%	80.6%
Malden	14	1,041	2,765	3,806	129%	97%	106%	80.6%
Malden	14	128	369	497	127%	103%	109%	80.6%
Randolph	14	218	1,823	2,041	140%	85%	92%	80.6%
Brockton	15	87	167	254	126%	52%	82%	101.4%
Brockton	15	318	816	1,134	166%	90%	118%	101.4%
Brockton	15	179	142	320	126%	104%	119%	101.4%
Brockton	15	850	523	1,373	126%	125%	126%	101.4%
Brockton	15	2,816	4,549	7,364	140%	116%	127%	101.4%
Brockton	15	722	313	1,035	144%	120%	138%	101.4%
Brockton	15	5,103	4,761	9,864	166%	115%	146% x	101.4%
Brockton	15	716	420	1,135	161%	115%	147% x	101.4%
Brockton	15	270	251	521	185%	141%	165% x	101.4%
Brockton	15	395	209	604	184%	139%	171% x	101.4%
Brockton	15	860	853	1,713	240%	130%	192% x	101.4%
Brockton	15	94	51	145	278%	149%	238% x	101.4%
Brockton	15	137	86	224	328%	151%	285% x	101.4%
Brockton	15	127	80	206	379%	162%	303% x	101.4%
Brockton	15	216	63	279	353%	271%	340% x	101.4%
Everett	15	521	994	1,515	127%	93%	103%	101.4%
Lynn	15	2,502	4,434	6,936	137%	105%	119%	101.4%
Lynn	15	463	520	983	126%	113%	120%	101.4%
Lynn	15	1,645	555	2,200	142%	101%	133%	101.4%
Lynn	15	529	431	960	163%	91%	134% x	101.4%
Lynn	15	2,159	1,274	3,433	148%	115%	137%	101.4%
Lynn	15	131	111	243	188%	105%	155% x	101.4%
Lynn	15	1,205	751	1,956	186%	171%	181% x	101.4%
Revere	15	692	438	1,129	122%	85%	108%	101.4%
Revere	15	1,286	938	2,224	129%	120%	125%	101.4%
Revere	15	288	171	460	150%	87%	130% x	101.4%
Revere	15	528	381	909	149%	146%	148%	101.4%
Revere	15	1,147	769	1,916	161%	185%	170% x	101.4%
Revere	15	291	226	517	178%	183%	180% x	101.4%

ERPs with 3-Year Average Exposures in High Loss Ratio Territories Over 50 and
with a 3-Year Average Loss & ALAE Ratio Over 120% in these territories:

Agency Location (Town & Terr)		3-Year Average Exposures			3-Year Loss Ratio			Average Loss Ratio in Territory
		High LR Territory	Low LR Territory	Total	High LR Territory	Low LR Territory	Total	
Springfield	15	295	50	345	125%	68%	118%	101.4%
Springfield	15	1,510	4,449	5,959	138%	116%	123%	101.4%
Springfield	15	1,502	2,245	3,747	160%	120%	138% x	101.4%
Springfield	15	903	86	989	140%	158%	141%	101.4%
Springfield	15	927	352	1,279	155%	126%	148% x	101.4%
Springfield	15	3,055	1,963	5,018	166%	131%	154% x	101.4%
Springfield	15	3,495	1,939	5,434	167%	129%	155% x	101.4%
Springfield	15	505	242	747	185%	137%	171% x	101.4%
Springfield	15	366	1,107	1,473	205%	162%	173% x	101.4%
Springfield	15	962	432	1,394	207%	118%	182% x	101.4%
Springfield	15	80	347	427	328%	155%	196% x	101.4%
Springfield	15	78	252	330	196%	209%	206% x	101.4%
Springfield	15	192	41	233	275%	381%	290% x	101.4%
Chelsea	16	1,305	365	1,669	135%	137%	135%	124.4%
Lawrence	16	324	325	649	130%	104%	119%	124.4%
Lawrence	16	784	528	1,312	137%	105%	126%	124.4%
Lawrence	16	280	260	540	155%	92%	129% x	124.4%
Lawrence	16	1,631	1,647	3,278	162%	138%	152% x	124.4%
Lawrence	16	651	406	1,057	201%	112%	173% x	124.4%
Lawrence	16	1,697	1,094	2,790	196%	183%	192% x	124.4%
Lawrence	16	1,065	484	1,549	221%	186%	213% x	124.4%
Lawrence	16	379	95	475	222%	181%	216% x	124.4%
West Roxbury	17	1,827	3,405	5,232	153%	103%	124% x	68.4%
West Roxbury	17	290	1,199	1,490	201%	112%	133% x	68.4%
Roslindale	18	470	365	835	120%	104%	114%	127.9%
Roslindale	18	324	462	787	145%	92%	116%	127.9%
Roslindale	18	132	146	279	142%	114%	130%	127.9%
Roslindale	18	376	341	717	171%	127%	154% x	127.9%
Roslindale	18	223	136	360	217%	197%	211% x	127.9%
Roslindale	18	715	257	972	297%	298%	298% x	127.9%
Jamaica Plain	19	1,382	602	1,985	347%	286%	331% x	107.7%
Hyde Park	20	1,044	910	1,954	129%	101%	118%	135.1%
Hyde Park	20	591	266	856	241%	204%	232% x	135.1%
Dorchester	21	263	319	582	130%	72%	104%	135.0%
Dorchester	21	3,147	3,321	6,467	126%	99%	115%	135.0%
Dorchester	21	1,086	831	1,918	156%	103%	137% x	135.0%
Dorchester	21	335	126	461	145%	159%	148%	135.0%
Dorchester	21	517	645	1,162	158%	140%	150% x	135.0%
Dorchester	21	510	286	796	153%	170%	159% x	135.0%
Dorchester	21	682	201	883	158%	243%	174% x	135.0%
Dorchester	21	1,460	2,417	3,877	205%	156%	179% x	135.0%
Dorchester	21	1,031	762	1,793	200%	154%	184% x	135.0%
Dorchester	21	1,230	429	1,659	204%	197%	203% x	135.0%
Dorchester	21	294	135	430	204%	200%	203% x	135.0%
Dorchester	21	936	587	1,523	213%	197%	208% x	135.0%
Dorchester	21	691	294	985	230%	222%	229% x	135.0%
Dorchester	21	463	130	593	217%	305%	231% x	135.0%
Dorchester	21	1,120	536	1,656	231%	235%	232% x	135.0%
Dorchester	21	1,386	610	1,997	271%	246%	264% x	135.0%
Dorchester	21	1,363	408	1,771	288%	282%	287% x	135.0%
Dorchester	21	950	378	1,328	403%	408%	404% x	135.0%
Mattapan	21	141	170	311	163%	94%	133% x	135.0%
Mattapan	21	605	241	847	167%	162%	166% x	135.0%
Roxbury	22	540	487	1,027	130%	140%	134%	147.8%
Roxbury	22	367	302	669	135%	148%	140%	147.8%
Roxbury	22	925	283	1,208	170%	197%	175% x	147.8%
Roxbury	22	1,301	447	1,748	187%	193%	188% x	147.8%
Roxbury	22	1,127	395	1,522	301%	308%	302% x	147.8%
Boston Central	23	618	3,049	3,667	161%	92%	105%	71.3%
Boston Central	23	539	1,110	1,649	147%	113%	126%	71.3%
Boston Central	23	208	1,567	1,775	232%	117%	137% x	71.3%
Boston Central	23	165	438	604	201%	105%	139% x	71.3%
Boston Central	23	2,230	7,494	9,724	210%	122%	146% x	71.3%
Allston	24	1,502	4,645	6,147	128%	84%	95%	66.5%
Allston	24	190	326	516	124%	109%	115%	66.5%
Allston	24	79	498	576	178%	127%	135% x	66.5%
Allston	24	56	284	340	265%	115%	139% x	66.5%
Allston	24	275	1,321	1,596	170%	133%	140% x	66.5%
Allston	24	180	251	431	173%	186%	180% x	66.5%
Brighton	24	57	428	485	145%	63%	75%	66.5%
Brighton	24	132	991	1,123	153%	94%	103%	66.5%
Brighton	24	100	1,934	2,034	167%	114%	117%	66.5%
Brighton	24	1,324	2,057	3,381	167%	103%	132% x	66.5%
Brighton	24	160	392	552	236%	160%	189% x	66.5%
South Boston	25	94	379	472	122%	101%	106%	84.8%
South Boston	25	209	586	795	156%	115%	129% x	84.8%
Charlestown	26	135	65	200	138%	152%	142%	101.5%
East Boston	26	438	342	780	131%	111%	123%	101.5%
East Boston	26	941	224	1,164	141%	123%	138%	101.5%
East Boston	26	1,661	646	2,307	147%	124%	141%	101.5%
East Boston	26	1,623	1,006	2,629	146%	143%	145%	101.5%
East Boston	26	710	224	934	173%	172%	173% x	101.5%
East Boston	26	715	386	1,101	202%	169%	191% x	101.5%
East Boston	26	2,826	751	3,577	234%	262%	239% x	101.5%
Total All Agencies		121,271	199,628	320,899	176%	114%	141%	
Total 87 High LR	x	73,083	85,232	158,315	200%	141%	173%	

Notes:

Agencies marked with an "x" have either:
- Total 3-year loss ratio over 150%, or
- High LR territory 3-year loss ratio over 150% and total 3-year loss ratio over 120%

Note that high LR territories are 15, 16, 18-22 and 26. These territories have subsidies of at least \$50, based on data provided by AIB.

Automobile Residual Markets

Appendix D

There are Four Types of Residual Markets in the US

- Assigned Risk Plans or Automobile Insurance Plans (AIPs)
 - With or without Limited Assignment Distribution (LADs)
- Joint Underwriting Associations (JUAs)
- Reinsurance Facilities (RFs)
- State Funds (SFs)
- CAR - a quasi-reinsurance facility

Differences Between Residual Market Types

	AIP	JUA	RF	SF	CAR
Number of States (Including DC)	42	5	2	1	1
Format	Individual AIP risks assigned to individual carriers based on voluntary market share	Limited number of serving carriers, pooled operating results shared by member companies based on voluntary market share	All insurers are servicing carriers, pooled operating results shared by member companies based on total market share	SF applicants purchase insurance directly from the Fund. Losses subsidized by insurers.	Most insurers servicing carriers, pooled operating results shared by member companies based on total market share
Rating	AIP rates	JUA rates	Voluntary market rates	SF rates	Voluntary market rates
Insureds into Residual Market	Rejected by voluntary carriers, forwarded to AIP	Rejected by voluntary carriers, forwarded to servicing carrier	Ceded by carrier – insured and producer may not know if ceded or retained	Rejected by voluntary carrier, forwarded to SF	Ceded by carrier – insured and producer may not know if ceded or retained

Pros and Cons of Residual Market Types

	AIP	JUA	RF	SF
Pros	<ul style="list-style-type: none"> ■ Self-funding rates ■ Incentives for insureds to move out of AIP ■ Incentives for carriers to reduce losses from AIP business 	<ul style="list-style-type: none"> ■ Self-funding rates ■ Limited number of servicing carriers may have greater expertise in residual risks ■ Incentives for insureds to move out of JUA 	<ul style="list-style-type: none"> ■ No stigma ■ Greater affordability 	<ul style="list-style-type: none"> ■ Self-funding rates ■ Incentives for insureds to move out of SF
Cons	<ul style="list-style-type: none"> ■ Stigma of rejection ■ May have fewer coverage options 	<ul style="list-style-type: none"> ■ Stigma of rejection ■ May have fewer coverage options 	<ul style="list-style-type: none"> ■ Tend to generate deficits ■ No incentives for drivers to shop for lower rates 	<ul style="list-style-type: none"> ■ Stigma of rejection

Size of Residual Markets in 50 States Plus DC

State	Rank	2000 Total Wr Prem (\$Mill)	2000 Pers Lines Wr Prem (\$Mill)
Massachusetts	1	\$578	\$454
North Carolina	2	516	468
New York	3	399	371
New Jersey	4	227	179
Maryland	5	103	96
South Carolina	6	54	48
California	7	35	23
Pennsylvania	8	32	30
Michigan	9	29	22
Virginia	10	23	17
All other 41		<u>105</u>	<u>72</u>
Total		\$2,099	\$1,780

Net Results of Operations in RFs/JUAs - Deficits for Policy Year 2000 (\$Mill)

CAR	Massachusetts	\$323
RF	North Carolina	135
RF	New Hampshire	0
RF	South Carolina	2
JUA	Florida	(2)
JUA	Hawaii	9
JUA	Minnesota	21
JUA	Missouri	0
JUA	South Carolina	1

Example of Connecticut AIP - General

- Carriers are not subject to “take all comers”
- Insureds are rejected (or offered policy at rates greater than AIP)
- Producer forwards application to AIP
- Plan manager assigns policy to a carrier
- Carrier:
 - Writes policy for three years
 - Collects AIP-level premiums
 - Settles claims
 - Incurs overhead expenses
 - Pays producer commissions (currently 10%)
- OR: pays another carrier to service the business on its behalf
- Full coverage available (limits up to \$250/\$500/\$100, plus physical damage)
- Installment plans available

Example of Connecticut AIP - Governance & Responsibilities

- Governing Committee - with one-year terms
 - Eight carriers
 - Two producers
 - Commissioner
- Managed by AIPSO
- Performance standards for both carriers and producers

Example of Connecticut AIP - Allocation

- Allocation to carrier of AIP policies based on non-AIP **exposures** lagged two years
 - For example, 2002 assignments based on 2000 market share
 - Two-year lag produces lower uncertainty for carriers
 - Allocation applied to AIP-generated **premiums**
 - Allocation of highest rated/highest risk policies taken into account
 - Credits available for voluntarily writing males under 25 years of age
- Allocation to carrier of AIP overhead expenses based on non-AIP exposures and premiums, lagged two years

Example of Connecticut AIP - Comparison to CAR

■ CAR

■ Rating Plan

- same as voluntary rates
- 9 class (experience/use/principal-non)
- 27 terr (non-contiguous towns)

■ Tempering of Relativities

- both classes and territories significantly tempered

■ Credits

- SDIP (6 years)
- Driver training
- Multi-car
- Anti-theft
- Senior citizen

■ Connecticut AIP

■ Rating Plan

- AIP rates
- 26 class (age/sex/marital/use/princ-non)
- 18 terr (major cities/towns, or counties)

■ Tempering of Relativities

- Territories tempered through 75/25 rule, classes not tempered





■ Credits

- Careful Driver (3 years)
- Driver training
- Multi-car
- Anti-theft
- Senior citizen with accident prevention course

CAR Claims Oversight Review

Appendix E

Comparison of CAR Performance Standards to Industry Best Practices

Practice	Industry Best Practice Reviews	CAR Performance Standards	Comments
Assignment	<ul style="list-style-type: none"> ■ Were claims assigned to the adjuster in a timely fashion w/in standards? ■ Was all appropriate information recorded and prompt action taken? 	<ul style="list-style-type: none"> ■ Limited to first party auto physical damage and PIP claims 	<ul style="list-style-type: none"> ■ Should be expanded to apply to all claims 
Coverage Analysis	<ul style="list-style-type: none"> ■ Was coverage verified in a timely fashion according to standards? ■ Were appropriate exclusions and endorsements considered? ■ Were coverage issues resolved quickly and appropriately? 	<ul style="list-style-type: none"> ■ Limited to PIP claims 	<ul style="list-style-type: none"> ■ Should be expanded to apply to all claims 
Initial Contacts	<ul style="list-style-type: none"> ■ Were initial contacts with the insured, claimant(s) and witnesses timely? Was information gathered appropriately and documented? ■ Was the contact method appropriate? 	<ul style="list-style-type: none"> ■ Limited to PIP claims 	<ul style="list-style-type: none"> ■ Should be expanded to apply to all claims 
Investigation	<ul style="list-style-type: none"> ■ Were claims properly investigated? ■ Appropriate fact gathering? ■ Injury/damages documented and verified? ■ Completed in a timely fashion? ■ Was special investigation (i.e., SIU/ Fraud) performed when necessary and performed properly? ■ Were fraud indicators recognized and investigated? 	<ul style="list-style-type: none"> ■ Specifically addressed for all areas 	<ul style="list-style-type: none"> ■ Consistent with best practices 



Fully meets best practice or equivalent






Partially meets best practice or equivalent






Best practice not followed


Continued...

Comparison of CAR Performance Standards to Industry Best Practices

Practice	Industry Best Practice Reviews	CAR Performance Standards	Comments
Follow Up/ Control	<ul style="list-style-type: none"> ■ Was communication with the parties ongoing? ■ Issues promptly recognized and addressed? ■ Was the claim file guided to resolution vs. reacting to information? ■ Proper diary system employed and reports and authority levels followed? 	<ul style="list-style-type: none"> ■ Limited to automobile physical damage and PIP claims 	<ul style="list-style-type: none"> ■ Should be expanded for all claims 
Evaluation	<ul style="list-style-type: none"> ■ Were claims evaluated for resolution properly? ■ All elements of the claim properly analyzed — extent of damages/injury, lost wages, pain and suffering, etc.? ■ Was liability apportioned properly? ■ All appropriate internal parties involved in evaluation? 	<ul style="list-style-type: none"> ■ Limited to PIP, BI and Automobile Physical Damage claims 	<ul style="list-style-type: none"> ■ Should be expanded to all claims and a qualitative assessment included 
Loss Management	<ul style="list-style-type: none"> ■ Were the proper loss management, assessment and verification tools and resources properly used? ■ IME utilization? ■ Medical management? ■ Expert involvement? ■ Cause and origin determinations made? ■ Depreciation and ACV calculations appropriately applied? ■ Damages properly scoped/appraised and causally related to accident? 	<ul style="list-style-type: none"> ■ Limited to PIP and Automobile Physical Damage claims 	<ul style="list-style-type: none"> ■ Should be expanded to all claims 





 Fully meets best practice or equivalent


  Partially meets best practice or equivalent


 Best practice not followed


Continued...

Comparison of CAR Performance Standards to Industry Best Practices

Practice	Industry Best Practice Reviews	CAR Performance Standards	Comments
Reserving	<ul style="list-style-type: none"> ■ Were the initial reserve and subsequent reserve changes made in a timely fashion? ■ Were amounts appropriate and properly documented? 	<ul style="list-style-type: none"> ■ No specific requirement 	<ul style="list-style-type: none"> ■ Should be addressed for all claims 
Litigation Management	<ul style="list-style-type: none"> ■ Were the case issues and strategy analyzed for desired outcome? ■ Were the appropriate resources assigned to the case? ■ Referral timely and appropriate? ■ Legal action plan documented with reasonable budget? ■ Changes made to plan when appropriate and documented in file? ■ Ongoing strategy evaluation? 	<ul style="list-style-type: none"> ■ No specific requirement other than the servicing carrier must as a general policy have a litigation management plan 	<ul style="list-style-type: none"> ■ Needs to be addressed for specific application to claim file reviews 
Settlement	<ul style="list-style-type: none"> ■ Was settlement pursued in a timely fashion? ■ Was the claim properly analyzed to identify facts to support position and settlement dollar range? ■ Were negotiations reasonable and the end result within the established and approved range? 	<ul style="list-style-type: none"> ■ Partially addressed for PIP and BI claims. Fully addressed for first party auto physical damage claims. 	<ul style="list-style-type: none"> ■ Needs to be expanded to apply to all claims and a qualitative assessment included 
Salvage	<ul style="list-style-type: none"> ■ Items disposed of within guidelines, promptly, and without unnecessary charges? ■ Legal documents properly handled? 	<ul style="list-style-type: none"> ■ Specifically addressed 	<ul style="list-style-type: none"> ■ Consistent with best practices 



 Fully meets best practice or equivalent


 Partially meets best practice or equivalent



 Best practice not followed


Continued...

Comparison of CAR Performance Standards to Industry Best Practices

Practice	Industry Best Practice Reviews	CAR Performance Standards	Comments
Recovery/ Offsets	<ul style="list-style-type: none"> ■ Was the possibility of recovery properly recognized, investigated and aggressively pursued? ■ Were recoveries properly recognized in the claim file accounting system? 	<ul style="list-style-type: none"> ■ Limited to PIP and first party automobile physical damage claims 	<ul style="list-style-type: none"> ■ Should be expanded to apply to all claims 
Over-payment Analysis (Leakage)	<ul style="list-style-type: none"> ■ Hard evidence of overpayment is clearly demonstrated as being excessive, leaving little room for dispute ■ Soft evidence of overpayment is arrived at by the file reviewer applying sound judgement 	<ul style="list-style-type: none"> ■ Limited to loss or expense payments not covered or made in error 	<ul style="list-style-type: none"> ■ Should be expanded to apply to all claim areas 

 Fully meets best practice or equivalent

  Partially meets best practice or equivalent

 Best practice not followed

Summary of Past Servicing Carrier Compliance Reports: 1999 – 2002

Claim	1999	2000	2001	2002
Amendments	0	9	0	2
Carriers Audited	29	27	31	31
File Reviewed	2,043	2,186	2,647	2,807
Allocating by Line	1/3 Each APD, BI/PD, PIP	Same	Same	Same
Voluntary v. Ceded %	50 v. 50%	50 v. 50%	50 v. 50%	76 v. 24%
% Commercial	40%	40%	30%	26%
Supplemental Reviews	4	4	4	1
Warnings Issued	4	6	1	4
Fines	\$1,000 – \$3,000	\$1,000 – \$20,000	\$1,000 – \$3,000	0
Appraiser Assignment Compliance	90%	92%	92%	92%
Appraiser Transmittal Compliance	93%	93%	94%	85%
Payment Compliance	89%	90%	97%	89%
Average Storage Days	10.8	11.7	13.2	13.8
Average Storage Costs	\$253	\$315	\$322	\$348

Summary of Past Servicing Carrier Compliance Reports: 1999 – 2002

Claim	1999	2000	2001	2002
% Reinspection > \$4,000	79%	82%	77%	80%
% Reinspection < \$4,000	32%	32%	32%	34%
Reinspection Warning	5	2	3	3
PIP Contact-EIP	85%	82%	93%	86%
PIP Contact-Driver	87%	87%	94%	90%
PIP Forms	85%	84%	89%	86%
Subrogation Notice		85%	95%	90%
ICPIP Compliance		73%	82%	87%
Tort Notification		85%	95%	90%

CAR Annual Reports of Compliance with Performance Standards: 1999 – 2002

SIU	1999	2000	2001	2002
Carriers Audited	30	30	18	18
Files Reviewed	1,249	1,310	630	448
Warnings	0	0	0	0
Fines	0	0	0	0
IFB Referrals	1	1 (cont. from 1999)	None Reported	None Reported
CAR Investigations	13	13 (cont. from 1999)	None Reported	None Reported
PIP/BI Referrals	7,147	6,542	4,901	5,282
Physical Damage Referrals	5,674	7,118	7,014	7,160
PIP/BI DCD Savings	\$38.3M	\$35.9M	\$30.1M	\$37.0M
MBR Usage	34,446	30,143	43,262	35,172
IME Usage	27,287	30,386	21,516	14,630
Physical Damage Savings	\$7.9M	\$10.1M	\$10.1M	\$11.8M
Physical Damage Referral Time	29 days	21 days	20 days	18.6 days